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The

BLUE JAY

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FOR SASKATCHEWAN AND ADJACENT REGIONS

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Frenchman River valley, near Val Marie Photo by Robert R. Taylor

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SASKATCHEWAN NATURAL HISTORY SOCIETY
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FOR THE SAKE OF ABSTRACT VALUES . . .

Since the publication of the *Blue Jay* is only one of the projects of the Saskatchewan Natural History Society, we often find ourselves thinking of the Society's other roles. In recent years, our organization has directed part of its energy and enthusiasm toward the preservation of natural wilderness. In December, 1965, for example, a brief was presented to the Government of Saskatchewan urging the establishing of a wilderness area in the Pasquia Hills, southeast of La Ronge. And it is not only through the efforts of executive officers that such a cause is promoted; perhaps the most valuable support comes from the personal conviction of individual members that wild lands have an inherent value because they are wild lands. In a letter in this number of the *Blue Jay*, a member from Norway House, Manitoba, tells how a canoe trip brought him a deep appreciation of the meaning of wilderness. When we try to define the real issue, however, it is not easy to find meaningful words. For this reason, our imagination was struck by the forthright statement made by Archie Carr in *The Reptiles* (by Archie Carr and the Editors of Life, 1963):

"No significant preserving of nature can be done with slight sacrifice. The true test will come when great sacrifices are needed, when it becomes necessary to fight the indifference of most of the world and the active opposition of much of it, to surmount man's ingrained determination to put the far future out of his mind in matters of current profit.

"Besides the inherent technical difficulties of wilderness conservation, the effort to save original nature faces a whole constellation of other kinds of problems. The easiest obstacle to recognize is the opposition by people who oppose the keeping of wilderness for material reasons. These people would shape the world into an ant hill; they are clearly mad. It is unthinkable that they will much longer control the destiny of the race. There is another block of humanity that simply does not care; and an unsorted lot who think of themselves as conservationists, and who in one way or another are, but who are not facing the really tough obligation at all. I refer to all people who think of saving nature for meat, water, timber or picnic grounds for the future; and to the hunters who hope their grandsons will get red blood by shooting things, and to the reverence-for-life cultists who are foredoomed to inconsistency, and to the biologists who resist the loss of material for study, and to keepers of zoological gardens who preserve nature in cages. Putting this mixture of motives and aspirations together under the label conservation has made, in some cases, a temporarily stronger front. But it has muddied the real issue, hidden the dimensions of the long job and kept everybody from articulating the awful certainty that the hard saving has got to be done for the sake of abstract values."

Cover photograph: David Chandler, and his sister Ruth, mutually enjoying a view looking north over the Frenchman River valley in southwestern Saskatchewan. Prairie dogs occur in the valley flats. It is in this area also that the Poor-will, a smaller version of the Common Nighthawk, has recently been found (see p.7).

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PERSONAL RECOLLECTIONS OF SOME EARLY SASKATCHEWAN NATURALISTS

by **Robert D. Symons,** Silton

Today's ornithologists and bird-watchers, professional or amateur, undoubtedly owe much to men of an older generation, who began to describe the varied bird life of our province and neighbouring areas. Dr. Stuart Houston has in these later years done yeoman service to the birders of Saskatchewan in unearthing information regarding the much earlier ornithologists who worked the Saskatchewan field, especially during the regime of the Hudson's Bay Company. Yet there is something of a gap between these pioneers and the many bird people of today; into this gap I am happy to press a few recollections of amateurs and others whom I have known personally. Perhaps the greatest contribution made by many of these people was not so much by way of intensive research, as by awakening and encouraging public awareness of the beauty and value of our native birds. We must appreciate that in the early 1900's and in the 1920's neither transportation nor communication as we know them — and much less time and money — were available. The average settler — like Spencer Pierce — was struggling for a toe-hold, and it is greatly to the credit of such people that they maintained their interest in a subject that brought no return except the priceless satisfaction of understanding and appreciating their surroundings.

(1) The first Saskatchewan bird man I met (when I was 12) was the late Rex Holmes. He was then back in England in his country home after a number of years in Canada. He had been one of the original Boon Colonists and had settled some miles north of the present Lloydminster. The little whistle-stop of Rex is named for him. He spent a good deal of his time hunting, but especially "birding", camping for weeks in the Onion Lake and Bronson Forest areas. He took many beautiful specimens which he sent to Roland Ward, London, for mounting and for storing in England. When I knew Rex his roomy study contained birds and mammals. I particularly remember sitting for hours drawing Gray Jays, Great Horned Owls, godwits, Pileated Woodpeckers and in particular a Yellow-headed Blackbird (or as he had it labelled— "Troupial"). Towards the end of World War I Rex went to Tanganyika. From there he contributed to the Museum at Nairobi, and was of assistance to Colonel Meinertzhagen who was preparing his classic work on the birds of East Africa. Rex is buried in Tanganyika, and after his death the birds were taken into the care of the Museum of Natural History at South Kensington, London. In one of his last letters to me, after I came to Saskatchewan, Rex said in part "There are many beautiful birds here (S. Africa) but they do not compare with the quite enchanting if less brightly-hued ones you will be encountering; nor does camel thorn and elephant grass provide such a romantic surrounding as the sparkling sloughs and green groves of the Saskatchewan country."

(2) In 1914, after my arrival in Canada, I made the acquaintance of the late Dr. H. M. Speechly of Pilot Mount, Manitoba, first by reading his nature column in the old Grain Growers Guide (now the Country Guide), and very soon by correspondence. I had no "bird book", but used to make coloured sketches of all the birds I saw, and these I sent to him for identification. He always replied in the most courteous and encouraging terms, naming my birds and giving me additional information. He was a country doctor of the old school, visiting his patients by horse and buggy. Not only a bird man, he was equally keen on botany and an

acknowledged expert on farm weeds, deploring the spread of alien species introduced by settlers, and ably assisting the budding Manitoba Department of Agriculture.

In one of his letters to me he gave a vivid description of some of his drives at early dawn, listing the species he had observed, besides describing the roadside scene in general, and the glorious morning salute of the birds against a prairie sunrise. Reading this, you could hear the marsh birds' cries and the clip-clop of his horse. Dr. Speechly was, he said of himself, just a "humble roadside naturalist." He is long since dead but I have been in correspondence with his widow and his daughter.

(3) Not long after my arrival in Canada (in the winter of 1915-16 to be specific) and while in training with the Canadian Expeditionary Force in the old Winter Fair Building in Regina, I met Fred Bradshaw, then Chief Game Guardian with the Department of Agriculture. He used to give "bird talks" at the City Hall and at various points in the province. I always attended these when possible. Bradshaw used the Audubon bird charts and a magic lantern. He had already started the nucleus of a museum with cases of mounted birds and some uncased mammals, which were displayed in the corridor of the Normal School Building in Regina (now part of the University of Saskatchewan).

Bradshaw—often with Neil Gilmour—travelled many long miles by buggy or Model T Ford all over the province, but particularly the southwestern cow-country, exhorting and encouraging the ranchers and settlers to help preserve our wild life, especially (in the Prince Albert area) the Wapiti, and in the Cypress Hills area, the Antelope and Sage Grouse. Very aware of the perils besetting what he called "our finest bird"—the Whooping Crane, he also began to make public his fears for their continuation and corresponded extensively with many

Photo by Fred G. Bard, Sask. Museum of Natural History

Fred Bradshaw (left) and H. Hedley Mitchell, Rush Lake, Sask., 1928 people, sending out hundreds of small booklets explaining the specific differences between these birds and swans, Snow Geese and pelicans. He finally relinquished his position with the Game Branch when it was transferred to Railways, Labour and Industry (!), and became the first Director of the Museum. Some of his letters contain references of great interest, such as "a mockingbird in full glorious song at Wilcox", and "a little colony of Sharp-tailed Sparrows nesting on the golf course at Regina."

Bradshaw, a tall gangling Yorkshireman with a shock of white hair, was always extremely sceptical of reports of new birds, and always demanded very definite proof, as this writer well remembers. He wrote several articles for the Canadian Field Naturalist. He also assisted in drafting a number of laws relevant to conservation — a cause to which he was keenly dedicated. He died in Victoria, B.C. in 1956.

(4) At this time I also met the late Hedley Mitchell, the Museum preparator, another man of great charm, much humility and wide knowledge. Born in England he came to Canada to follow his beloved birds, and was engaged by the National Museum to make field trips and prepare skins. He told me that he was once chased off the Six-nations reserve by angry Indians who asked him if he did not know it was an offence against the Manito to shoot small song birds unless one was starving! "In my heart", he added, "I echo those sentiments; but *this* was *my* bread and butter!" Always ready to encourage, to share information, and with a tremendous capacity for living, this good-natured and humorous man was also a good preparator and a keen observer. We are all more or less familiar with Mitchell's Catalogue of Saskatchewan Birds, a very real contribution to the scanty literature of those days. The Museum certainly owes a great deal to Mitchell who prepared some of the early cases of birds in habitat with a dedicated joy. He retired in 1932 to Victoria, B.C.

(5) Two men who might be mentioned here are Mr. George Lang of Indian Head, and Mr. Angus Buchanan who did extensive field work in the Churchill River area. The two Barren-ground Caribou in the present Museum were taken by the latter, among other specimens. Mr. Lang, who was Superintendent of the Indian Head Forestry farm, observed—if I am not mistaken —several uncommon species of birds, including the Scarlet Tanager and and Stellar's Jay. However, as I only met these two gentlemen very briefly, I should not enlarge on their activities, as there are others far better informed about them.

(6) I had earlier met Spencer Pierce of Ravenscrag in the Cypress Hills, and had spent more than one evening with him and his sisters in their ranch house in its lovely coulee setting. Even so, there are again others (like Fred Bard) who are far more capable of writing about this knowledgeable and kindly man than myself. His records are in general, I believe, to be found in Mitchell's "Catalogue." To me then, he was above all, another source of inspiration and encouragement. (Laurence Potter I never met, by the way, although he was a keen observer for years in this same area.)

(7) Neil Gilmour of Moose Jaw I did not meet until about 1926 or 1927, although I had heard much of him previously. He was one of the early Game Guardians under Bradshaw, but above all he was a bird man. I am not aware that he wrote on the subject, other than his reports to his Chief. He worked chiefly the south and west parts of the province. His report on finding the last known nest of the Whooping Crane near Kerrobert is well written, with considerable detail. (See *Can. Field Nat.*) It was closely followed as to habitat and terrain in making up the museum case of the Whooping Cranes, and was a most valuable aid. Neil was another dedicated man whose work was in the nature of a labour of love, for the mere pittance such men received could not otherwise repay them for the long hours they spent in the field and expo-

sure to the elements in open vehicles. Gilmour spoke in hundreds of rural schools and was indefatigable in spreading the gospel of conservation.

(8) It was in 1926 also, that I first met Fred Bard, the present Museum Director. Fred was then assistant to Mitchell, and it was under the latter's able direction that he himself became a highly skilled taxidermist. After Mitchell's retirement, Fred took over all the preparation of skins and cases, even painting the background. I have in mind particularly a case of jack rabbits in winter in which the background shows a farmer pulling away from a straw stack with a team and a rack load of fodder. It is interesting to reflect that today it would be impossible to duplicate that scene! Fred's grandfather had been a taxidermist in England and his father was a member of the Royal Northwest Mounted Police, but also keenly interested in wildlife, so clearly this interest ran in the family. Fred and I, under the direction of Bradshaw, put on the first wildlife exhibits at the Regina and Saskatoon Fairs in 1927—I think I painted some panels of birds, against which we posed mounted specimens, and on a table in front was displayed as much of the free literature of the day (in pamphlet form) as was available. It was hot, tiring work sitting on camp chairs in a tent. I think we each received $75.00 a month and a maintenance allowance of $2.00 per day for board and room. But we kept our moss cool with water, and I remember Lady Lake (who was on a visit to the Prairies) asking permission to rest in one of our camp chairs while we poured cold water on her hot, tired feet!

Early in the Depression years the Museum came under the new Department of Natural Resources with Fred Dunk as Director, but its development was impeded by lack of funds. A greater blow was to come as a result of Hitler's war, for the Normal School Building was required for the use of the Military. The whole collection was put into cold storage in a dilapidated warehouse with Fred Bard as caretaker. There it remained for several years. Fred used to go daily, fire up a little old wood and coal heater, and do his best to preserve the collections from dirt and damp. Not a very encouraging employment. When the war was over the exhibits were taken back to the original building (by now used by the Department of Public Health), and housed in the basement. It was from this point that the institution began to expand, since money gradually became more easily available, and public interest more greatly aroused. We all know what has been accomplished since those days.

But I think of Fred more especially as a splendid companion in the field. I camped with him at the Cochin Narrows, where he found Forster's Tern nesting, as well as on the Carrot River, where we watched the evening flights of the Chimney Swifts. Once, on the Nelson flats at Battleford, we were chased by a bull. The animal objected to Fred snooping around with his camera, and probably thought this strange man-creature with a tripod and black head cloth meant no good by his harem! I am short-legged, and could not keep up with Fred's long strides and said "keep a-going!", but he said "never", and turning, levelled his camera and tripod at the bull, who paused long enough to allow us to gain the shelter of some trees.

There would be no object in my writing about Fred's contribution to our knowledge of Saskatchewan birds, for we are all aware of it.

(9) I should like to mention very briefly a few other men. One is Dewey Soper (now of Edmonton) who brought back much information from his biological survey of the International Boundary. Soper constantly urged me to write about birds, in particular the birds of the Cypress Hills and the Pasquia Hills—Cumberland House area.

There was also Mr. H. P. Gordon, who had an exhibit of mounted specimens (which I saw in the early '30's) in the Physics Building in the University at Saskatoon, just below Gus Kenderdine's studio. He was an oldish man whose scientific knowledge was limited but whose interest was great. I remember he had a male and a female Marsh Hawk mounted together, labelled respectively "the Grey Harrier" and "the Brown Harrier"(!) which gives him away as another Englishman! Yet still he aroused a great deal of interest among university students and I am sure his efforts were not wasted. I remember that Kenderdine made a portrait of the old gentleman in oils, the said gentleman in the act of mounting a magpie, if I remember rightly. How many readers of the *Blue Jay* remember this man who was called "The Naturalist?"

Finally, the late Barny Lindner, rancher at the Middle Fork, Cypress Hills. He never could have thought of himself as a "naturalist" or even a "bird lover" (!), nor did he ever put pen to paper, but he had an astonishing knowledge of the birds and animals of the Cypress Hills and the short-grass plains. Many were the trips we made together and many were the nests of Sage Grouse we discovered on his Middle Fork flats. He was a realistic conservationist, and he would never allow coyote hunters within his extensive fenced lease, for he held that coyotes were part of range ecology and did far less harm than the hunters.

We may feel reasonably assured that, under the inspiration of these, and many more not mentioned for lack of space, there are a goodly number of young people in our Province who will feel proud and happy to carry on in the footsteps of those who work for knowledge, appreciation, and conservation today. I feel personally privileged to have known well and to have worked with some of yesterday's birders.

Sask. Govt. Photo

Aerial view of Cypress Hills

AN EXTENSION OF THE KNOWN RANGE OF THE POOR-WILL IN SASKATCHEWAN

by **Clive Elliott**, Calgary, Alberta

Until recently there were only two records of the occurrence of the Poor-will *(Phalaenoptilus nuttallii)* in Saskatchewan. Both Mitchell (1924) and Potter (1943) tell of a Poor-will heard calling for two or three nights in June, 1905 by L. B. Potter at his ranch at Eastend in extreme southwestern Saskatchewan. It is significant that this was Potter's only record at the ranch in 40 years. A more curious record is that cited by Mitchell (1924) of a Poor-will seen at the south end of Last Mountain Lake in 1920 by C. H. Young. Young was assistant to P. A. Taverner, and at the time he and Taverner were visiting Mitchell's field camp. Museum records show that this was at Little Arm, west of Regina Beach, some time between June 18 and September 7. It should be noted that the higher portions of this area are sandy and arid, and that those were dry years.

On August 22, 1961 the first Poor-will specimen for Saskatchewan was taken to the northwest of Eastend at Calf Creek in the Cypress Hills by B. McCorquodale and A. E. Swanston (Bard, 1961), and at that time at least six different birds were reported heard. At Calf Creek (8-8-22 w3) I collected a second specimen on July 15, 1964 (Beck, 1965).

In the summer of 1965, while employed by the Saskatchewan Museum of Natural History, I found Poor-wills in Saskatchewan in the Frenchman River area east of Val Marie, in the Cypress Hills as far west at least as the West Block ranger station, and in the Great Sand Hills east of Fox Valley. The dates of occurrence and the numbers recorded suggest that this species breeds in the province.

On June 25, 1965 I heard two Poor-wills calling about 10:30 p.m. near Walker's ranch buildings located in the Frenchman River Valley about six miles west of the point where the river crosses the international boundary. On June 28 two Poor-wills were heard calling in Otter Creek valley about three miles northeast of Walker's ranch buildings, about 11:00 p.m. Again on July 2, two Poor-wills were heard near Walker's ranch buildings and attempts were made to call them in. Twice one came in and perched close by, but neither time was the bird seen, and hence it was not collected. The birds did not circle around or come very close as this species often does when its call is imitated.

Shortly after this I began work in the West Block of the Cypress Hills. On July 12, three Poor-wills were heard about 10:30 p.m. on the hillside immediately east of the West Block ranger station, located north of Fort Walsh near Battle Creek. On July 17 attempts were made to call in these birds, but none was heard calling that night, and none would answer or come to investigate. On July 18 a single Poor-will was heard calling on the southwest side of Battle Creek, about 400 yards southwest of the ranger station; but attempts to call in birds east of the ranger station were again unsuccessful. One bird was observed flying over, but did not come down to investigate, and none answered.

On July 23, I moved camp to the Great Sand Hills east of Fox Valley. Some time was spent calling that night, but no Poor-wills answered and none was observed. On July 24, however, my calls were answered about 10:00 p.m., and after calling and stalking the bird for about 15 minutes, I saw it flying low over the hilltops and dipping down between the hills, then it circled over me several times, coming as close as about four feet. After being shot at, it circled two more times, then disappeared. More calls from myself brought it back immediately, however, and I was able to collect the bird.

On July 26, about 10:00 p.m., while hiking through the sandhills looking for Kangaroo Rats, I kept up a steady series of Poor-will calls, and was answered by what was evidently a different bird about every quarter to half mile for a distance of about two miles. One bird was called in and it circled me in the same manner as the first, whereupon a shot was fired. It immediately flew around a nearby hill and began calling from a tall sage brush. Attempts to call it back were unsuccessful, and upon being approached, it flew about 300 yards and perched again. I continued calling and carefully approached to within about 150 yards of it, when it suddenly appeared circling close to me, and I was therefore able to collect a second specimen.

It may be of interest to note that the stomach of one of the Poor-wills collected contained 100 per cent moths, and that of the second nearly as high a percentage, with one or two beetles as well. A Common Nighthawk collected in the same area had no moths, but nearly 100 per cent beetles and flies in its stomach. The Nighthawks begin to be active much earlier in the evening than the Poor-wills, although many Nighthawks are still still flying when the Poor-wills begin to call. Much more data would be needed to form any conclusions, but this scant amount of information suggests the definite ecological difference which we would expect to find between the two species.

Considering the range over which the Poor-will is now known to occur, and looking for conditions of climate and vegetation similar to that in its known range, this bird should be looked for in the western part of Saskatchewan as far north at least as the South Saskatchewan River, as far west as the Alberta border, south to the international boundary, and east to Regina and the Killdeer "badlands." The Big Muddy area south of Bengough would seem a likely habitat, but in three weeks spent there in June, 1965 I did not hear a Poorwill.

The known range of the Poor-will in Saskatchewan includes areas ranging in climate from very hot and dry, such as the Great Sand Hills and the Frenchman Valley, to relatively cool and humid, like the Cypress Hills.

It would be interesting to know whether the Poor-will has occurred in Saskatchewan for a long period of time, or whether it has extended its range only recently to include this province. Because it is active only late at night, it generally goes unnoticed by local people, and so its history here may be hard to trace. It was found in the Cypress Hills in Alberta in 1945 (Salt and Wilk, 1958), and has since been listed as breeding in Alberta (A.O.U., 1957) though no mention is made in the latter publication of its occurrence in Saskatchewan.

I would like to thank Fred G. Bard, Director, Saskatchewan Museum of Natural History, for sponsoring the field work, and Miss Margaret Belcher for assisting in the preparation of this report.

LITERATURE CITED

American Ornithologists' Union. 1957. Check-list of North American birds. Fifth ed. 691 pp.

Bard, F. G. 1961. First Poor-will specimen for Saskatchewan taken. Blue Jay, 19:172.

Beck, W. H. 1965. Second Poor-will specimen for Saskatchewan. Blue Jay, 23:82.

Mitchell, H. H. 1924. Catalogue of the birds of Saskatchewan. Can. Field-Nat., 38:101-118.

Potter, L. B. 1943. Bird notes from southwestern Saskatchewan. Can. Field-Nat., 57: 69-72.

Salt, W. R., and A. L. Wilk. 1958. The birds of Alberta. The Queen's Printer, Edmonton. 511 pp.

CALL FOR ALBERTA BIRD RECORDS

Alberta observers who have not yet submitted their 1965 records are urged to write at once for a supply of *report slips to* Dr. M. T. Myres, Alberta Bird Report, Dept. of Biology, University of Alberta, Calgary, at Calgary, Alberta. In order to have your observations used in the *Alberta Bird Report 1965* it is essential that records be received on official forms as soon as possible.

SASKATCHEWAN'S FIRST SPECIMEN OF THE BLUE-WINGED WARBLER

by **Frank Brazier,** Regina

On November 9, 1965 while driving to work at 1:15 p.m. I noticed a small bird lying on the pavement at 21st Avenue and Elphinstone Street. I was about to dismiss it as another road-killed House Sparrow when on coming closer I saw its plumage included much yellow. This was long after freeze-up and any bird seen in Regina at that time of year with that much yellow on it would be very strange indeed, so I stopped and picked it up. I saw at once that this was a stranger to me, and having no field guide at hand I could not identify it. Later that day with the help of Robert W. Nero and Robert R. Taylor it was identified as a Blue-winged Warbler *(Vermivora pinus)*. This identification was confirmed by Dr. W. Earl Godfrey of the National Museum of Canada, Ottawa, to whom the specimen was later sent. It is now in the collections of the University of Saskatchewan, Regina Campus.

This was really an astounding record in view of both the normal range of this bird and the lateness of the season. Since one of the nearest points of its normal range is southeast Minnesota, I wrote to Ron Huber of St. Paul for some information; the stomach of our bird contained a great quantity of insects but no eggs or pupa cases as it would have had if it had fed by gleaning, so I also asked Ron about insect life on November 8. His reply (dated December 6), as usual, was most informative and useful:

"The status here [of the Blue-winged Warbler] has been pretty much the same for many years; it is a yearly breeder in the southeast one-ninth of the State . . . Minneapolis and St. Paul are just about as far north as the bird gets here. It prefers pseudo-Carolinian habitat and is always considered a 'choice' bird since few birders know how to locate it. This year it did wander westward in our State to Nicollet and Wright counties. There were also more reports than usual of the Golden-winged, and we had an interesting number of reports of hybrids between the two, some verified by photographs . . . As for the level of insect activity on Nov. 8-9, there was some. My last butterfly of this year was on Nov. 1 . . . several cold days followed and then another warm period . . . our last moth record was just a few days before Thanksgiving . . . Two days ago, after a movie, my wife and I saw a small yellowish bat flying around downtown for a new late date. It almost looked like a Pipistrelle but they're rare here."

The Regina bird was a male of the year in excellent condition which, for some strange reason, was apparently migrating in the opposite direction to normal. A check with the local meteorological office revealed no strong southeasterly winds at any level; at 3,000 feet there were south winds of three mph and at 4,000 feet they were southeasterly at six mph. Mr. J. F. Quine advised that these figures would be representative in a radius of 200 miles and for a period of four hours earlier. He added "Further checking shows that there were no really useful southerly winds during the previous 24 hours in the area 100 miles to the south of us."

This bird provides Saskatchewan's first specimen of the Blue-winged Warbler, which can now be included in the official list (as a straggler), but it is almost certainly not the first record. On May 19, 1963, Betty and Al Binnie, of the staff of the Provincial Correctional Institution northeast of Regina, examined a similar bird under good conditions, but this sighting has never been published. On the next day (May 20) Betty Cruickshank and Dorothy Wade examined a small bird obligingly perched on a fence about 10 miles east of Regina which checked out in every detail with the description of a Blue-winged Warbler but this record likewise was never published.

Spring stragglers are to be expected; for many reasons birds get lost on the spring migration and turn up in the oddest places. But our fall bird was most unusual in that it defies logical explanation—no storm pushed it north, no flocks of migrants were flying north which it might have accompanied. In view of the distance it no doubt travelled (perhaps as much as 600 miles) and the condition of the stomach contents, one could reasonably guess it had flown steadily northward for many hours, probably overnight since warblers normally migrate at night, and at about 25 mph.

There is one hypothesis which might account for its presence in Regina; it may have become disoriented. Ron Huber states elsewhere in his letter: "Our weather here has been rather strange, warm and cold spells alternating." At Regina we experienced a long open fall caused by a series of low-pressure systems coming from the west, and as these commonly bring much cloudiness far into the interior, our bird could have conceivably started south one night, run into heavy cloud which obscured the stars and ultimately arrived in Regina rather than Central America.

THE 1965 FALL WARBLER MIGRATION AT REGINA

by **Margaret Belcher, Alvin Binnie** and **Betty Binnie,** Regina

In the Regina area, observers of the 1965 fall migration were struck by the unusual abundance of transient warblers, the number of species represented, and the late dates of departure for some of these.

Ordinarily at Regina, located in the middle of treeless plains, we do not see many warblers. The resident species are limited to the Yellow Warbler and the Yellowthroat, with a single extralimital breeding record of the Myrtle Warbler obtained in the summer of 1965 (Brazier, 1965). During the spring and fall migration there are sometimes conspicuous "waves" of warblers, but in other years the migration season may pass without producing any large numbers. Of the migrants, the Myrtle Warblers are, of course, the most abundant, and they are ordinarily the first to arrive in spring and the last to leave in the fall. On the other hand, species like the Audubon's Warbler, Black-throated Green, Blackburnian, Chestnut-sided, Bay-breasted, Connecticut, Mourning, and Canada Warbler, have been considered rare or very rare transients, irregular or occasional in their occurrence (Belcher, 1961). This is in spite of the fact that some of these are known to breed farther north in the province—and may even be abundant in their breeding range.

In some cases, the explanation for the scarcity of sight records of the migrant warblers appears to be that the migration passes over Regina without birds stopping here for food and shelter. This is borne out by the counts made in recent years of birds killed at the TV towers. During the first reported fall TV tower kills (Nero, 1961) we were struck by the number of Bay-breasted Warblers (3), which constituted nine per cent of the total count of warblers recovered at the CKCK-TV tower on September 3, 1961. Two species of warblers considered "rare"' or "very rare" were also present — Mourning Warbler (1) and Connecticut Warbler (1); and a MacGillivray's Warbler provided the first substantiated record of that species for the Regina area. Again on September 10, 1961, two Bay-breasted Warblers were recovered at the CKCK tower. During the 1962 fall migration, five Bay-breasted and three Connecticut warblers were recovered at the CKCK-TV tower on September 7 (Lahrman, 1962), and in the fall of 1964, although there were only two Bay-breasted Warblers recovered at the Regina TV towers, on September 4, a striking number of Mourning and Canada Warblers were among the casualties — 17 Mourning Warblers at CKCK and one at CHRE on August 21, 14 at CKCK and five at CHRE on September 4; eight Canada Warblers at CKCK and one at CHRE on August 21, three at CKCK on September 4 (Lahrman, 1965). The number of these species that are considered rare that are recovered regularly at Regina TV towers should prepare us for the occasional occurrence of rather numerous sight records of such species, when some peculiar combination of circumstances "grounds" the warblers that ordinarily fly over us without stopping in Regina.

Some fall migrations are of course much more spectacular than others. In 1961, for example, we considered the fall migrants, especially warblers and nuthatches, unusually abundant. The fall of 1965 appears to have been an even more exciting season for bird-watchers. In Regina, in addition to the warblers, there appeared in unusual numbers Yellow-bellied Sapsuckers, Red-breasted Nuthatches, Hermit Thrushes and Fox Sparrows. Most of our records come from two locations which offer shelter to migrants stopping for rest and food, the city itself with the trees and shrubbery of the Legislative Grounds and of established residential areas, and the well-treed grounds of the Provincial Correctional Institution, three miles east of the city. Observations by Al and Betty Binnie at PCI, and by Margaret Belcher and many other observers in the city, form the basis of the sight observations included in this report, while checks at the TV towers were made by Fred W. Lahrman of the Saskatchewan Museum of Natural History and by Al Binnie. Binnie visited the CHRE-TV tower on August 27 and 31, and on September 17, 19 and 26; Lahrman checked the taller CKCK-TV tower (670′) two miles to the south, on August 27, 28, 29 and 31, on September 3, 9, 11, 12, 16, 17, 19, 22, 25 and 30, and on October 1, 2. Lahrman also checked the CHRE tower on September 30 and October 2, and A. Swanston of the Museum staff, visited the CHRE tower on August 31, collecting 35 birds in addition to those found there by Binnie on that date.

The last week of August, 1965 in Regina was cloudy, cool and windy, beginning with rain on the 25th after a hot, dry period. The cloudy, cool weather on the night of August 26-27, with a light sprinkling of rain and a northeast wind, produced the first tower kills of the fall migration, and continuing wet weather (with 1.15 inches of rain falling between August 25 and 31) contributed to a record number of casualties on the night of August 30-31.

At the CHRE-TV tower Binnie collected 10 birds of seven species on the afternoon of August 27 (Table 1) and Fred Lahrman collected 55 birds of 13 species at the CKCK-TV tower (Table 2). Lahrman had visited the CKCK tower the evening before (10:30-11:30 p.m.) recognizing that weather conditions were likely to cause a collision mortality. He describes the visit in his notes: "On arrival I could hear a continuous chirping of warblers and caught an occasional glimpse of one as it darted over the building among the guy wires. One warbler (a waterthrush) was found dead on the pavement. Towards 11:30, just before I left, the number of migrating birds had apparently increased as they were then continuously in sight, and often up to seven could be seen at once. They appeared to be ghostly white in colour silhouetted against the black sky, being lighted up from underneath by the lights on the parking lot. They were obviously confused by the lights of the tower, as they would dart past, only to stop suddenly and dart back in the other direction. Some would

TABLE 1
Warblers recovered at CHRE-TV tower, Regina, fall 1965

Species	Aug. 27	Aug. 31	Sept. 17	Sept. 30	Total
Black-and-white	....	13	....	....	13
Tennessee	....	49	....	2	51
Yellow	1	14	....	....	15
Magnolia	....	4	....	....	4
Myrtle	....	....	....	2	2
Chestnut-sided	1	....	....	....	1
Blackpoll	....	9	....	....	9
Palm	....	1	....	....	1
Ovenbird	1	11	....	....	12
Northern Waterthrush	....	23	1	....	24
Mourning	1	1	....	....	2
Yellow-throat	....	....	1	....	1
Wilson's	....	12	....	....	12
Canada	2	1	....	....	3
Total	6	138	2	4	150

flutter moth-like alone around the structure, others fluttered against the brick wall on the south side of the building which was lighted up by the parking lot flood lights. Some of the birds were flying just high enough to clear the building and others were much higher and could just barely be seen. No doubt some were up beyond the range of the lights."

The night of August 30-31 was heavily overcast with a light drizzle and a strong northwest wind. The result was the largest tower kill ever recorded for Regina—172 birds at CHRE and 227 at CKCK. In addition to dead birds collected at the towers (Tables 1, 2), Al Binnie and his daughter Carole took home three injured birds—a Magnolia Warbler, a Northern Waterthrush and a Tennessee Warbler, sheltered them overnight and released them the following morning. They also saw some less seriously injured birds which they were unable to catch, one of these being a female American Redstart.

The month of September was wet, very cool and windy. On September 17, cold rain turned to snow, driven by a strong northwest wind. However, none of the checks made at the towers during September showed the high mortality figures of August 26-27, or especially of August 30-31.

Eighteen species of warblers were recovered at the TV towers in Regina in the 1965 fall migration, compared with 13 species in 1964, 12 species in 1962, and 15 species in 1961, a year in which, as noted above, we considered the migration unusually good. In the TV tower collisions the species suffering the greatest number of casualties in 1965 were the Black-and-white, Tennessee, Yellow, Blackpoll, Ovenbird, Northern Waterthrush and Wilson's. What is striking here is the lack of correlation between numbers recovered in TV kills and numbers observed normally during the migration; for example, the Myrtle Warbler, always considered to be much the most abundant of the migrant warblers, is represented by only 10 TV tower recoveries in 1965, and not a single Orange-crowned Warbler was picked up in all these visits to the towers! On the other hand, the Ovenbird, which is seen regularly but never in numbers (I recall being surprised to find at least three in a small area in the Legislative Grounds on August 31 this year — M.B.), accounted for 37 of the warbler casualties. The large number of Ovenbirds killed is no longer a surprise, however, since there were 55 casualties of this species in the fall of 1964, 13 in 1962, 17 in 1961. The TV casualties of the night of August 27 included one individual each of two species not otherwise recorded this fall — the Blackburnian and the Chestnut-sided. Three Connecticut Warblers were recovered at the TV towers, whereas only one was reported at Regina as a sight observation (September 8); 12 Mourning Warblers were recovered, against two sight observations (August 26, 27). The Canada Warbler, not reported every year in Regina, seemed more abundant — one was observed on August 26 in the Legislative Grounds (G. F. Ledingham), and the Binnies reported the species on August 27, September 10 and 11, at PCI; but note that 12 Canada Warblers were recovered at the towers on August 27 and 31 (12 Canada Warblers were also picked up at the towers in the fall of 1964)!

Turning from the record TV tower kills, we find another indication of the variety of species of warblers in the 1965 fall migration at Regina in the recorded sight observations. Of the 28 species listed as occurring in the province in the *Field check-list of Saskatchewan birds* (Houston, Bard and Nero, 1959) 23 species were recorded by observers reporting to the *Aububon Field Notes* regional compiler. If we add the Blackburnian and Chestnut-sided warblers recovered at the towers, to make a count of 25, the only Saskatchewan species missed in the 1965 fall migration were the Black-throated Blue, the MacGillivray's and the Yellow-breasted Chat. In addition, a new species was added for Regina and Saskatchewan by Frank Brazier's discovery of a dead Blue-winged Warbler on a Regina street on November 9 (reported in this issue of the *Blue Jay*).

We do not have figures to establish the abundance of the 1965 fall warblers in comparison with previous years, but all observers were generally in agreement with Doug Gilroy that these were "rather exceptional migration movements." One of the striking examples was the Palm Warbler: Doug Gilroy reported a "huge concentration at his farm on September 12, and mentioned a new wave of Palm Warblers and Myrtles on September 19, while Ruth Tempel saw

TABLE 2

Warblers recovered at CKCK-TV tower, Regina, fall 1965

Species	Aug. 27	Aug. 28	Aug. 29	Aug. 31	Sept. 3	Sept. 9	Sept. 12	Sept. 16	Sept. 17	Sept. 19	Sept. 22	Sept. 25	Sept. 30	Oct. 2	Total
Black-and-white	3	....	....	11	....	....	....	....	....	....	....	....	....	....	14
Tennessee	3	....	1	76	2	2	....	....	2	....	....	1	3	1	91
Yellow	18	....	....	14	3	....	....	....	....	....	....	1	....	....	36
Magnolia	....	....	....	5	....	....	....	....	....	....	....	....	....	....	5
Myrtle	....	....	....	1	....	....	....	....	1	1	1	2	1	1	8
Blackburnian	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Bay-breasted	1	2	....	1	....	....	....	....	....	....	....	....	....	....	4
Blackpoll	....	....	....	11	....	1	....	....	1	....	....	4	1	....	18
Palm	....	....	....	1	....	....	....	....	....	....	....	2	....	....	3
Ovenbird	....	....	....	20	2	....	....	1	1	....	1	....	....	....	25
Northern Waterthrush	5	1	....	13	1	....	....	2	....	....	....	....	....	....	22
Connecticut	2	....	....	1	....	....	....	....	....	....	....	....	....	....	3
Mourning	1	....	....	9	....	....	....	....	....	....	....	....	....	....	10
Wilson's	8	1	1	19	1	....	1	....	....	....	....	....	....	....	31
Canada	3	....	....	6	....	....	....	....	....	....	....	....	....	....	9
American Redstart	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Total	46	4	2	188	9	3	1	3	5	1	2	10	5	2	281

about 250 feeding along a roadside just west of Regina, in company with a similar number of Myrtles. We think it also worthy of note that Bay-breasted Warblers were reported frequently and by different observers from August 27 to October 1. This, and the TV kills of recent years, would suggest a revision of the status of this warbler described as a "very rare, irregular transient" in the Regina area (Belcher, 1961), but we cannot take this as a pattern until balanced by further years' observations. Mrs. Ann Gammell, who banded Bay-breasted Warblers this year at Kenmare, North Dakota, in approximately the same period (September 2 to October 3) reports to the *Audubon Field Notes* compiler that she has noted "an increase in this species the past two falls." Similarly, the Cape May Warbler, for which we have the unusual number of three sight records this fall, has been reported more commonly than usual in the province—a Cape May seen September 24 at Fort San by Manley Callin was considered of "special interest"; one seen September 28 by Mrs. Hubbard at Grenfell was her first observation of this warbler at the farm; and the Cape May was considered "more common than usual in fall migration", noted to September 25, in Saskatoon.

The warbler migration elsewhere in the province, as at Regina, was generally considered exceptional. Mrs. Hubbard at Grenfell wrote that "the unusual and nice part about it was to be able to walk out in your own backyard (around the dugouts) and be able to identify five or six species of warblers all at one crack—not to mention the one of two that 'got away' ", and her "big day" was September 19 when it was sunnier and warmer after the snow of the previous two days. At Moose Jaw, according to Mrs. F. B. Taylor's report, the migration brought unusually large numbers of Black-and-white Warblers, Northern

TABLE 3

Arrival and departure dates for Regina fall warbler migration, 1965.

Species	First Seen	Peaks	Last Seen
Black-and-white	Aug. 24	Aug. 26, 28, 31	Sept. 25
Blue-winged	Nov. 9		
Tennessee	Aug. 24	Aug. 26, 31	Oct. 4
Orange-crowned	Aug. 31	Sept. 29	Oct. 9
Nashville	Aug. 27		Sept. 28
Parula	Oct. 21		Oct. 24
Yellow	Aug. 24		Sept. 23
Magnolia	Aug. 31		Oct. 1
Cape May	Sept. 23		Oct. 21
Myrtle	Aug. 27	Aug. 27, 29, Sept. 21, 23, 24	Oct. 31
Audubon's	Sept. 24		Sept. 29
Black-throated green	Aug. 31		
Bay-breasted	Aug. 27		Oct. 1
Blackpoll	Aug. 29	Sept. 24	Oct. 9
Pine	Sept. 12		Sept. 24
Palm	Aug. 31	Sept. 12, 19, 23, 24	Oct. 26
Ovenbird	Aug. 24		Sept. 30
Northern Waterthrush	Aug. 24		Oct. 1
Connecticut	Sept. 8		
Mourning	Aug. 26		
Yellowthroat	Sept. 10	Sept. 29	Sept. 29
Wilson's	Aug. 22	Aug. 26, 28	Oct. 1
Canada	Aug. 26		Sept. 11
American Redstart	Aug. 24	Aug. 28. Sept. 25	Oct. 8

Waterthrushes and American Redstarts, and some rare species such as Magnolia, Bay-breasted, Black-throated Blue, and Canada Warblers. Warblers were reported as unusually common in Saskatoon this fall, and Dr. Stuart Houston had a very successful season of banding (see article in this issue). However, at Fort Qu'Appelle, Manley Callin found only Myrtle Warblers as abundant as usual, with other species fewer in number.

The abundance of warblers and the variety of species represented in the 1965 fall migration makes it seem worthwhile to show arrival and departure dates, with indications of peaks where possible (see Table 3). It will be seen in this table that almost all the common migrants had arrived in the area by the end of August, and it will also be noted that a surprisingly large number of species did not leave until October. These late dates are curiously interesting, especially since they represent some of the most striking observations — the Parula Warbler seen by the Binnies from October 21 to 24, the Cape May Warbler seen by Belcher October 21 (previously on September 23 by R. W. Nero, and on October 3 by the Binnies), and of course the Blue-winger Warbler found dead on November 9. The last record we have for the season is that of an unidentified warbler, described as being greenish in colour, with a gray head and white eye-ring, glimpsed briefly by Greg Bobbitt on November 13.

In making this survey, the authors wish especially to acknowledge the work done by Fred Lahrman, who visited the CKCK-TV tower regularly throughout the fall migration and made his notes available for this report.

LITERATURE CITED

Belcher, Margaret. 1961. Birds of Regina. Spec. Pub. No. 3, Saskatchewan Nat. Hist. Society, Regina.

Binnie, Alvin. 1965. Parula Warbler recorded near Regina. Blue Jay, 23:170.

Brazier, Frank. 1965. A Myrtle Warbler nesting record for Regina. Blue Jay, 23:125-126.

Lahrman, Fred W. 1962. Fall migration TV tower kills, 1962. Blue Jay, 20:152.

Lahrman, Fred W. 1965. Regina and Lumsden TV tower bird mortalities, 1964. Blue Jay, 23:18-19.

Nero, Robert W. 1961. Regina TV tower bird mortalities - 1961. Blue Jay, 19:160-164.

Nero, Robert W. 1962. Regina TV tower mortality May 11-12, 1962. Blue Jay, 20:151-152.

MIST NETTING AT SASKATOON, AUTUMN 1965

by **C. Stuart Houston** and **Mary Houston,** Saskatoon

Mist netting of birds has long been an art in Japan, but it was first popularized on this continent by Oliver L. Austin, Jr., who served with the American troops during the occupation of Japan immediately following the war. Silk or nylon nets, 30 to 60 feet in length and five or six feet high, are strung between poles. The nets are virtually invisible so that birds readily fly into them and pocket themselves unharmed. A special permit is required to operate mist nets.

On five weekends in August and September, 1965, 10 to 12 nets were put in place on Saturday evening and attended from dawn to dusk on Sunday, at 15- to 20-minute intervals. An excellent sampling of the migration was thus obtained, for example, no less than 17 species of warblers and four species of vireos were banded, for a total of 190 individuals. With the bird in the hand, one can identify with certainty many species that would be difficult or impossible to identify in the field. Weights and measurements were obtained of all individuals. Members of the Saskatoon Natural History Society who assisted included Jim Slimmon (see photo), J. B. Gollop, Glen A. Fox, Sandy Macaulay, John Black, Cliff Matthews, Bill Richards, Jonathan Gerrard, Bob Ipema and Stan Houston.

Photo by Hans Dommasch

Jim Slimmon, Newsletter editor and president of the Saskatoon Natural History Society, removing a bird from a mist net.

The accompanying table shows the most interesting of the species which we banded. The wading birds were banded at the north shore of a four-mile long marshy area known locally as "Rice Lake", one mile south of Hawoods, or 11 miles north and one mile east of Delisle. The other birds were netted in the Beaver Creek valley, adjacent to the Game Farm, 10 miles south of Saskatoon. Totals for the weekends were as follows: 136 individuals of eight species on August 21-22; 16 birds of nine species on August 28-29; 59 of 18 species on September 4-5; 53 of 16 species on September 11-12; 115 individuals of 18 species on September 18-19.

TABLE 1

Species of interest trapped in mist nets and banded near Saskatoon.

Species	Date	No. banded
Semipalmated Plover	Aug. 21-22	13
Killdeer	Aug. 21-22	4
Lesser Yellowlegs	Aug. 21-22	6
Pectoral Sandpiper	Aug. 21-22	13
Least Sandpiper	Aug. 21-22	52
Semipalmated Sandpiper	Aug. 21-22	46
Hermit Thrush	Sept. 15-Oct. 6	6
Swainson's Thrush	Aug. 27-Oct. 5	67
Gray-cheeked Thrush	Aug. 29-Sept. 26	14
Ruby-crowned Kinglet	Sept. 18	1
Solitary Vireo	Sept. 2-12	2
Red-eyed Vireo	Sept. 5	2
Philadelphia Vireo	Sept. 12	1
Warbling Vireo	Sept. 5	1
Black-and-white Warbler	Sept. 5	1
Tennessee Warbler	Sept. 2-19	18
Orange-crowned Warbler	Sept. 7-10	8
Yellow Warbler	Aug. 29-Sept. 11	5
Magnolia Warbler	Sept. 19	2
Cape May Warbler	Sept. 4-19	7
Myrtle Warbler	Sept. 5-19	46
Chestnut-sided Warbler	Sept. 2	2
Bay-breasted Warbler	Sept. 2-5	4
Blackpoll Warbler	Sept. 2-19	31
Ovenbird	Aug. 31-Sept.19	17
Northern Water-thrush	Aug. 25-Sept. 19	24
Mourning Warbler	Sept. 16	1
Yellowthroat	Oct. 3	1
Wilson's Warbler	Aug. 31-Sept. 12	8
Canada Warbler	Aug. 20-Sept. 1	2
American Redstart	Aug. 29-Sept. 9	8

INFORMATION WANTED ON OWL NESTS

Anyone finding a Great Horned Owl nest with young in April or May anywhere in the province or nearby is asked to please contact Dr. Stuart Houston, 863 University Drive, Saskatoon, or phone collect to 244-0742.

From 385 Great Horned Owls banded to date, Dr. Houston has had 49 recoveries, including two from Minnesota, two from North Dakota, one from South Dakota, and seven from Manitoba. From further banding, it is hoped to learn more about the wanderings of this "non-migratory" species.

SWALLOW MORTALITY AT MOOSE MOUNTAIN

by **Spencer G. Sealy,** Battleford

A sudden onset of inclement weather during the period May 23 to May 26, 1965, resulted in a mortality of swallows in the Moose Mountain Provincial Park in southeastern Saskatchewan. Four species were involved: the Tree Swallow *(Iridoprocne bicolor)*, Bank Swallow *(Riparia riparia)*, Barn Swallow *(Hirundo rustica)*, and Cliff Swallow *(Petrochelidon pyrrhonata)*. The first indication of this oncoming mortality came on May 26 when Ross Lein and myself observed swallows (largely Bank Swallows) seeking shelter in shallow burrows excavated in a low roadside cutbank near Clarke's Resort (see photo). Light snow had fallen early that morning, accompanied by a temperature low of 27° F., while the maximum temperature reached during the day was only 37°F., far below the 63°F. recorded on this date in 1964. Close examination showed that a form of torpor had been assumed by many of the swallows, making it possible for some to be caught by hand; the birds removed from the burrows revived and flew with their usual skill, a phenomenon also recorded by Lorenz (1932) and McAtee (1947). Swallows were continually flying between the cutbank and Kenosee Lake, a distance of about 500 yards, where a large flock had formed over the water to search for insects.

On May 27 at the cutbank near Clarke's Resort, 27 Bank Swallows and one Tree Swallow were found dead; some were on the ground beneath the burrow entrances, but most were huddled together in the short burrows. Subsequently 46 more swallows were found dead at various locations in the park (see Table 1). The Barn Swallows and one Cliff Swallow had sought shelter under the eaves of camp kitchens where they perished; one Tree Swallow died under the eaves of the Chalet.

Photo by Robert R. Taylor

Temporary refuge site used by swallows

TABLE 1.

Swallow mortality in Moose Mountain Provincial Park, Saskatchewan, following unseasonable weather in May, 1965.

Species	Date	Number Found Dead	Average Weight (gm.)	Location in Park
Tree Swallow	May 27	1	13.8(1)*	Clarke's cutbank
Tree Swallow	May 27	1	....	Chalet
Bank Swallow	May 27	27	11.5(14)	Clarke's cutbank
Bank Swallow	May 27	1	10.0(1)	Cabin
Bank Swallow	June 4	11	....	Gravel pit
Barn Swallow	May 28	22	13.6(6)	Camp kitchens
Cliff Swallow	May 28	1	16.4(1)	Camp kitchen
Cliff Swallow	June 4	10	....	Gravel pit
		74		

* Number in sample.

TABLE 2.

Temperature and precipitation (Rainfall and snowfall in inches) for May, 1964 and 1965, in Moose Mountain Provincial Park, Saskatchewan. (Figures in parenthesis are those for 1964).

Period	Mean Max. Temp. (°F.)	Mean Min. Temp. (°F.)	Mean Temp. (°F.)	Precipitation
May 1-30	60.8(64.0)	35.4(39.6)	48.1(51.8)	3.11(3.30)
May 1-23	62.7(64.4)	35.2(41.8)	48.9(53.1)	1.75(3.30)
May 24-26	47.6(68.7)	34.6(40.6)	41.1(54.6)	1.84(0.00)
May 26	36.0(63.0)	27.0(40.0)	31.0(51.5)	0.95(0.00)

According to Huxley *et al* (1939) torpidity, a temporary poikilothermy, is promoted by numerous factors; two which appear to be acting here are low temperatures, and consequently, a lack of food. Swallows are insectivorous, foraging only on the wing, therefore sudden inclement weather as was experienced here (see Table 2) would cause most of the flying insects to disappear, thus greatly depleting their food supply. As hunger becomes more critical at low temperatures due to higher general metabolism, more energy is required to maintain a constant body temperature (Kendeigh, 1945). Thus, as more energy, obtained from food, is required during a period of low temperature these birds suffer when their sole food supply is lacking. According to Kendeigh (1944) this energy for increased metabolism must come from the body reserves, chiefly fats, and the extent of these reserves is important in the bird's ability to tolerate low air temperatures for any length of time. The swallows are meanwhile utilizing the energy they have flying around seeking insects in vain. It would be interesting to compare weights of the swallows prior to perishing and after death to see if an appreciable weight loss had occurred.

These observations were made by Ross Lein, Richard Sanderson and myself while engaged in a survey of the birds of Moose Mountain under the direction of Dr. Robert W. Nero.

I should like to thank Mr. R. T. Douglas, officer in charge of the Meteorological Observing Station, Broadview, Saskatchewan, for his cooperation in supplying the weather data used in this report.

LITERATURE CITED

Huxley, J., C. S. Webb, and A. T. Best. 1939. Temporary poikilothermy in birds. Nature, 143:683-684.

Kendeigh, S. C. 1944. Effect of air temperature on the rate of energy metabolism in the English Sparrow. Jour. Exp. Zool., 96:1-16.

Kendeigh, S. C. 1945. Resistance to hunger in birds. Jour. Wildl. Mgt., 9:217-226.

Lorenz, K. 1932. Beobachtungen an Schwalben anlaszlich der Zugkatastrophe in September 1931. Der Vogelzug, 3(1):4-10.

McAtee, W. L. 1947. Torpidity in birds. Am. Midl. Nat., 38:191-206.

TERRITORIAL AGGRESSION BETWEEN A DRAGONFLY AND HUMMINGBIRD

by **Richard S. Miller**, Saskatoon

A female Ruby-throated Hummingbird *(Archilochus colubris)* regularly visited flowers and hummingbird feeders in a garden in front of the University of Saskatchewan Biology Department cabin on Fairy Island, Emma Lake, during the summer of 1965. She established this as a feeding territory and chased other hummingbirds from it whenever they entered the clearing. This open area was also used as a feeding territory by dragonflies, mostly blue darners (Aeschnidae). On August 24 at 1:00 p.m. a male *Aeschna lineata* was observed chasing the female hummingbird from the clearing. The hummingbird returned in less than a minute and was chased away again, the dragonfly pursuing her to a height of 25 to 30 feet and over the roof of the cabin until she entered the woods. After four such encounters in about 10 minutes, the hummingbird stayed out of the territory and the dragonfly resumed its patrols.

A male *A. lineata* has a body length of about three inches and a wingspread of approximately four inches (Needham and Westfall, 1955) and, although not as stout, is comparable in these dimensions to a Ruby-throated Hummingbird, which is three to three and one-half inches long (Peterson, 1947). It is interesting to note that these two species have certain behaviours in common. Both hover in flight, both ascend rapidly when pursued, and a chase continues until the intruder leaves the area of the territory. The flight path of a chase between hummingbirds is very like similar encounters between aeschnids. Moore (1964) has observed that dragonflies, which are highly territorial, are especially aggressive toward members of their own species or other dragonflies which most nearly resemble them. Thus, the hovering flight, body size and metallic coloration of a hummingbird might easily provoke attack from a male *Aeschna lineata.*

LITERATURE CITED

Moore, N. W. 1964. Intra- and interspecies competition among dragonflies (Odonata). J. Anim. Ecol., 33:49-71.

Needham, J. G., and M. J. Westfall, Jr. 1955. A Manual of the Dragonflies of North America (Anisoptera). University of California Press, Berkeley. 615 pp.

Peterson, R. T. 1947. A Field Guide to the Birds. Houghton Mifflin Co., Boston. 290 pp.

CROWS WARMING THEMSELVES AT A CHIMNEY

by **Emerson A. Stoner**, Benicia, California

As a resident of California, I only infrequently have the opportunity to report an observation made while visiting our neighbouring country to the north. This fall my wife and I crossed the international boundary into British Columbia. While staying two nights at the Royal Towers Motor Hotel in New Westminster, we often looked out from our fifth floor window over the sweep of Fraser River country, where this fine river approaches the Strait of Georgia. Downward, on the roof of a lower building below us, was a moderately tall chimney from which in the mornings heavy clouds of smoke arose into the cold, damp, 40° air — intermittently smoke, then heavy heat waves. Finally the smoke ceased and only the strong waves of heat issued from the chimney.

While we were casually enjoying the view for a short period on the early morning of October 19, 1965, a pair of Northwestern Crows *(Corvus caurinus)* alighted on the roof below, hopped about a bit, and flew to the chimney opening where they alighted. I feared they would get burned, as the heat waves appeared intense. However, they apparently had done this before, for one and then the other peered down the chimney opening. They walked along the top of the brick chimney, then one spread its wings widely, absorbing some of the heat and drying its feathers. Its partner performed likewise for a few minutes, after which both departed towards likely feeding grounds, as this was breakfast time for all of us.

RECOLLECTION OF A PEREGRINE FALCON - PIGEON PURSUIT

by **S. Jordheim,** White Bear

Some time ago a Peregrine Falcon was attempting to catch pigeons on the farm here, at first pursuing some around the farmyard, but these soon found refuge in various buildings, while a flock of about 30 took safety, or presumed safety, by climbing to quite a height; this they often do when a Prairie Falcon or Goshawk is around, as these hawks rarely give chase if the pigeons are quite high. But with the Peregrine this meant nothing and he started up after them; as he climbed so did they, and in a short time I lost sight of the pigeons and only with careful observation could I see the falcon, just a mere speck directly above. I was about to give up watching, when I noticed the hawk travelling in a southeast direction, and also becoming a little easier to see, which meant he was coming down. I thought a pigeon must also be coming down but at first couldn't see it, then farther to the southeast and below the hawk I could make out a white speck plunging earthward. As the race continued, the distance between the two birds narrowed and about half way down, the hawk caught up, but just at the crucial moment the pigeon veered sharply to the side and away. The hawk did not appear to lose any speed; he made a long circle and then plunged down in pursuit, and again, I would guess about 50 feet above the ground, he caught up, and again the pigeon dodged the strike. Levelling off at just a few feet above the ground, it came into the yard with a loud whoosh, and the hawk made no more attempts at it, but with wings set close to its body zoomed upwards to a great height, and not until the force attained by his downward plunge was weakening, did he begin to fly and then to keep going up after the birds that were still up in the clouds. This time I could not keep sight of him, and whether he caught a pigeon, or not, I don't know, but I will never cease to be amazed at the perseverance and energy of this bird.

SECOND REPORT ON SASKATCHEWAN FALCONRY ASSOCIATION BANDING PROGRAM

by **Glen A. Fox,** Saskatoon

Our first banding report appeared in 1963 in the *Blue Jay*, 21:18. Since then our activities have been limited. Most of our members are attending university and this has greatly reduced our man-power. Below is a list of banding carried out since the publication of our first report.

Species	No. banded since 1963		Total to Date	
	Nestlings	Adults	Nestlings	Adults
Red-tailed Hawk	1	0	30	0
Swainson's Hawk	0	0	7	1
Ferruginous Hawk	3	0	9	0
Golden Eagle	4	0	5	0
Bald Eagle	2	0	2	0
Turkey Vulture	2	0	2	0
Marsh Hawk	3	0	46	0
Peregrine Falcon	0	0	0	2
Prairie Falcon	2	0	14	1
Merlin or Pigeon Hawk	0	0	12	0
Kestrel or Sparrow Hawk	0	5	5	9
Great Horned Owl	0	1	39	1
Long-eared Owl	0	0	12	1
Burrowing Owl	1	6	3	6
14 Species	18	12	186+21	
		=207 Raptors		

Grateful acknowledgment of co-operation is made to the Canadian Wildlife Service, Sask. Dept. of Natural Resources, Bernard Haysom, Ralph Carson, Mr. Frank Heidelbauer of Raven Industries Ltd., and Mr. Adam Deutscher.

Photo by Fred G. Bard, Saskatchewan Museum of Natural History

Whooping Crane family at Moose Jaw, October, 1965

WHOOPING CRANE POPULATION REPORT

On December 29, 1965, the U.S. Fish and Wildlife Service released the following information: "The fall migration of wild whooping cranes apparently is complete, and a record high of 44 whoopers is wintering at the Aransas National Wildlife Refuge in Texas, Secretary of the Interior Stewart L. Udall announced today. Of the 44 birds now at Aransas, eight are young-of-the-year—easily distinguished by the buff coloration of head and neck — and 36 are adults. The number of adults represents a loss of six mature birds from the total of 42 wild whoopers last year. One dead crane was found in western Kansas November 8. Evidence indicates the bird, an 18-month-old mate, was killed when he struck a power line. Because the whooping cranes nest in a wilderness area in the vicinity of Canada's Wood Buffalo National Park, the fate of the five other missing adults may never be known.

"The whooper vanguard of two adults arrived at the refuge sometime during the night of October 21. On an aerial survey, October 26, Refuge employees counted 15 birds, including three youngsters. There were 24 birds — 19 adults and five young—on November 2; 36, including eight young birds, on November 10; 31 adults and seven young on November 21; and a total of 44 birds on November 23. [We are interested in the increased number reported for November, since four birds that remained for approximately two weeks in stubble fields north of Moose Jaw left for the south on October 30.]

"Only 14 whooping cranes were in the wild flock when record keeping began in the winter of 1938-39 on the then newly established Aransas National Wildlife Refuge. The population rose to 26 in 1940-41, but dropped sharply to 15 the following year. There was a gradual increase to 34 in 1949-50, dropping again to 21 in 1954-55. After several years of fluctuating gains and losses, the whooper population reached a high of 38 in 1961-62. The following year, disaster struck. Six birds were lost to unknown causes and, for the second time since 1938, no young birds were produced. Thirty-two birds migrated north in the spring of 1964. These 32 brought 10 young-of-the-year with them when they returned to the Aransas Refuge in the fall of 1964.

"There are also seven whooping cranes in captivity. Six of these are at the Audubon Park Zoo in New Orleans and one, the injured Canus which was rescued from the Canadian wilds, is at the Monte Vista National Wildlife Refuge in Colorado."

NOTES ON BIRDS AND OTHER ANIMALS IN THE SLAVE RIVER - LITTLE BUFFALO RIVER AREA, N.W.T.

by **Robert E. Stewart,** Jamestown, North Dakota

In 1955, from May 20 to June 20 inclusive, a biological reconnaissance was made of the Slave River - Little Buffalo River area, located in central-southern District of Mackenzie, Northwest Territories, Canada, during an attempt to reach the nesting grounds of the Whooping Crane. The writer was accompanied on this expedition by Robert P. Allen of the National Audubon Society and Raymond Stewart of the Canadian Wildlife Service.

We travelled to and from the various areas that were surveyed by automobile, airplane, helicopter, motor canoe, canoe and paddle, and on foot. The localities visited are listed in chronological order in the following itinerary:

May 20-22—Vicinity of Fort Smith, including a visit to the Salt River area, a few miles to the north.

May 23—Travelled downstream by canoe on Slave River, from Fort Smith to Grand Detour Portage.

May 24-25—On foot, along Grand Detour Portage, between Slave and Little Buffalo Rivers.

May 26—Travelled upstream by canoe on Little Buffalo River from Grand Detour Portage to mouth of Sass River.

May 27—Travelled downstream by canoe on Little Buffalo River from mouth of Sass River to Great Slave Lake.

May 28-30—Shore of Great Slave Lake, at mouth of Little Buffalo River.

May 31-June 4—Vicinity of Fort Smith, including a visit to Salt River on June 1, and one day at Tsu Lake on June 2.

June 5-16—Vicinity of base camp, located along Sass River, between two and four miles above its junction with Little Buffalo River.

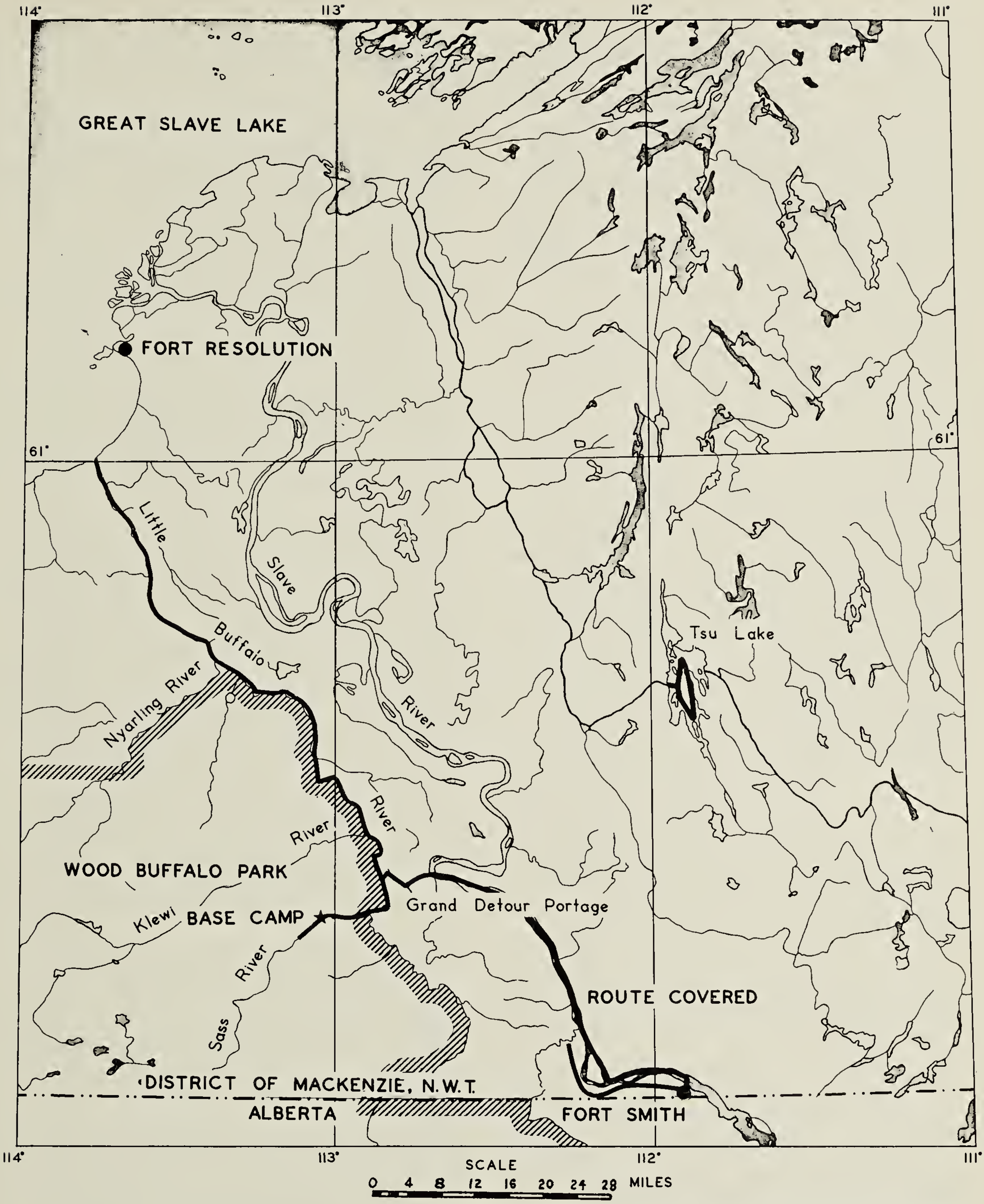
June 17-18—Travelled downstream on foot along Sass River and upper Little Buffalo River to Grand Detour Portage.

June 19-20—On foot, along Grand Detour Portage, between Little Buffalo and Slave Rivers.

The annotated lists of birds and other animals included in this report are based on field notes made by the writer, unless otherwise indicated. In addition to these observations, detailed population studies of breeding birds were made during June 13-16 on two 15-acre tracts of white spruce along the Sass River, a tributary of the Little Buffalo River that is located within the Wood Buffalo National Park. These population studies were published in *Audubon Field Notes*, 9 (6), 1955. A few of the bird records listed in the report were sent to Dr. Alexander Wetmore, and were useful in helping to delineate the northern limits of breeding ranges of birds as shown in the 1957 A.O.U. Check-list. One species, the Mourning Warbler, not listed in the report, probably also breeds in the area covered. On two or three occasions I thought I heard distant songs of this species along the Little Buffalo River, but was never quite positive enough to put them down as definite records. Although somewhat generalized, these notes may be of interest since they cover an unusually interesting faunistic area that is difficult of access and even more difficult to work in due to a nearly overwhelming scourge of mosquitoes.

Accounts of Birds

HORNED GREBE *Podiceps auritus*. Common in open cattail *(Typha latifolia)* sloughs throughout the Grand Detour Portage and Little Buffalo River areas. Courtship display noted on May 24.



Drawn by Dr. Lewis M. Cowardin

Slave River-Little Buffalo River area; heavy black lines show routes covered.

White Pelican *Pelecanus erythrorhynchos*. Thirty to 40 seen at Slave River rapids near Fort Smith on May 31.

American Bittern *Botaurus lentiginosus*. Heard calling in cattail sloughs at several locations in the Grand Detour Portage - Little Buffalo River areas.

Whistling Swan *Olor columbianus*. A migrating flock of 15 was observed overhead on May 25.

Canada Goose *Branta canadensis*. A few scattered pairs were noted in open sloughs along the Little Buffalo River. A small migrating flock was observed overhead on June 6.

Snow Goose *Chen hyperborea*. A

migrating flock, containing about 25 individuals, was observed overhead on May 23.

MALLARD *Anas platyrhynchos*. Fairly common as scattered pairs in open sloughs in the Grand Detour Portage area, and along the Little Buffalo and Sass Rivers. A total of 45 individuals was flushed along an 80-mile stretch of Little Buffalo River on May 27.

BLACK DUCK *Anas rubripes*. A single bird was observed with a flock of Mallards on Great Slave Lake, near the mouth of Little Buffalo River, on May 29.

PINTAIL *Anas acuta*. A few scattered pairs were observed in open sloughs in the Grand Detour Portage area and along the Little Buffalo and Sass Rivers. A nest containing eight nearly fresh eggs was found under a spruce log along the Little Buffalo River on May 26, and another nest with eggs was found at Slave River rapids near Fort Smith on May 31.

GREEN-WINGED TEAL *Anas carolinensis*. Common in the open sloughs in the Grand Detour Portage area and along the Little Buffalo and Sass Rivers. A total of 62 individuals was flushed along an 80-mile stretch of Little Buffalo River on May 27.

SHOVELER *Spatula clypeata*. A few scattered pairs were observed in open sloughs in the Grand Detour Portage area and along the Little Buffalo and Sass Rivers.

AMERICAN WIDGEON *Mareca americana*. Probably the most common breeding species of dabbling duck, occurring in open sloughs in the Grand Detour Portage area and along the Little Buffalo and Sass Rivers. A total of 69 individuals was flushed along an 80-mile stretch of the Little Buffalo River on May 27.

RING-NECKED DUCK *Aythya collaris*. Apparently uncommon. One pair was seen along Long Slough along the Grand Detour Portage on May 25, and another pair on the Little Buffalo River on May 27.

CANVASBACK *Aythya valisineria*. A few scattered pairs were noted in open sloughs along the Grand Detour Portage and near the Little Buffalo River.

LESSER SCAUP *Aythya affinis*. A few scattered pairs recorded in open sloughs along the Grand Detour Portage and on the Little Buffalo River.

COMMON GOLDENEYE *Bucephala clangula*. Common along the Little Buffalo River, and a few pairs were seen on the Sass River. This is the most numerous species of diving duck in the region. On May 27, a total of 199 individuals was flushed along an 80-mile stretch of Little Buffalo River. A hen with 10 tiny, newly-hatched young was observed on the Sass River on June 12.

BUFFLEHEAD *Bucephala albeola*. Fairly common in open sloughs along the Grand Detour Portage, and on the Little Buffalo River. On May 27, a total of 18 individuals was flushed along an 80-mile stretch of the Little Buffalo River. On this date, a male Bufflehead was observed fighting and chasing a female Lesser Scaup.

RUDDY DUCK *Oxyura jamaicensis*. Apparently uncommon. On June 20, Robert P. Allen observed a pair exhibiting courtship behaviour on Long Slough near the west end of Grand Detour Portage.

COMMON MERGANSER *Mergus merganser*. Recorded on lakes in Precambrian shield country, east of Slave River, but not observed in the Grand Detour Portage - Little Buffalo River area.

RED-BREASTED MERGANSER *Mergus serrator*. Recorded on lakes in Precambrian shield country, east of Slave River, but not observed in the Grand Detour Portage - Little Buffalo River area.

GOSHAWK *Accipiter gentilis*. Apparently uncommon. One was seen along the Little Buffalo River on May 27.

SHARP - SHINNED HAWK *Accipiter striatus*. Apparently uncommon. One was seen near the mouth of the Sass River on May 25.

RED-TAILED HAWK *Buteo jamaicensis*. One recorded along Grand Detour

Portage on June 20.

HARLAN'S HAWK *Buteo harlani* or melanistic Red-tailed Hawk. Three recorded along the Little Buffalo River, between mouth of Sass River and Great Slave Lake on May 26 and May 27.

GOLDEN EAGLE *Aquila chrysaetos.* An eagle, almost certainly this species, was observed being chased by Ravens on June 7, along the Sass River.

BALD EAGLE *Haliaeetus leucocephalus.* Three adults recorded along Little Buffalo River, between mouth of the Sass River and Great Slave Lake on May 26 and May 27.

MARSH HAWK *Circus cyaneus.* Two were observed in open prairie, near the Little Buffalo River on May 25 and May 29.

PEREGRINE FALCON *Falco peregrinus.* A pair was observed near the mouth of the Sass River on May 25 and May 27. These birds were about two miles from a large limestone escarpment.

SPARROW HAWK *Falco sparverius.* Scattered birds were observed in open "brule" and prairie edge situations in the Grand Detour Portage area and along the Little Buffalo and Sass Rivers.

SPRUCE GROUSE *Canachites canadensis.* Common in white spruce *(Picea glauca)* forests, particularly in stands located in alluvial bottomlands—apparently much less common in spruce forests of the upland. In a 15-acre tract of bottomland spruce along the Sass River, from two to four males were flushed repeatedly.

RUFFED GROUSE *Bonasa umbellus.* Fairly common in extensive stands of quaking aspen *(Populus tremuloides)* along the Grand Detour Portage.

WILLOW PTARMIGAN *Lagopus lagopus.* Remains, including feathers and wing fragments of several were found along the shore of Great Slave Lake, near the mouth of the Little Buffalo River — indicating that this species had been common during the previous winter.

SHARP-TAILED GROUSE *Pedioecetes phasianellus.* Fairly common in brushy prairie edge situations along the Grand Detour Portage.

WHOOPING CRANE *Grus americana.* Heard calling at night near base camp on Sass River on June 6 and 7. During an airplane flight over this general area, one was observed on May 22.

SANDHILL CRANE *Grus canadensis.* Fairly common in the vicinity of shallow, prairie potholes along the Grand Detour Portage. Noticeably more numerous from May 24 - 27, than during the period, June 18-20. Apparently, this was due to the fact that many of the prairie potholes had dried up during the intervening period.

SORA *Porzana carolina.* Frequently heard calling in cattail sloughs in the Grand Detour Portage area and near the Little Buffalo and Sass Rivers.

YELLOW RAIL *Coturnicops noveboracensis.* Call notes, almost certainly of this species, were heard in a sedge-meadow near the mouth of the Sass River on May 26.

SEMIPALMATED PLOVER *Charadrius semipalmatus.* Several individuals, possibly migrants, were observed at the mouth of the Little Buffalo River on May 29.

COMMON SNIPE *Capella gallinago.* Fairly common in marsh and sedge-meadow situations in the Grand Detour Portage area and along the Little Buffalo and Sass Rivers. Territorial or courtship flights were noted at all camping locations.

SPOTTED SANDPIPER *Actitis macularia.* Scattered breeding pairs were recorded along the Little Buffalo and Sass Rivers, and in marshy sloughs along the Grand Detour Portage. On May 27, apparently during the peak of migration, a total of 210 individuals was seen along an 80-mile stretch of the Little Buffalo River.

SOLITARY SANDPIPER *Tringa solitaria.* Rather uncommon as scattered breeding pairs along the Little Buffalo River and in nearby sloughs.

LESSER YELLOWLEGS *Totanus flav-*

ipes. Breeding pairs were found to be common in wet prairie-edge situations along the Grand Detour Portage and near the Little Buffalo River.

PECTORAL SANDPIPER *Erolia melanotos.* A flock of 18 migrants was observed along the Little Buffalo River on May 27.

HERRING GULL *Larus argentatus.* Fairly common along Great Slave Lake, on wider portions of the Little Buffalo River, and on the Slave River. Also occurred sparingly in the vicinity of the larger potholes along the Grand Detour Portage. Several nests with eggs were found on rocks in Slave River rapids at Fort Smith on May 31.

MEW GULL *Larus canus.* Fairly common along Great Slave Lake, on the Slave River, and on wider portions of the Little Buffalo River. Also occurred sparingly in the vicinity of the larger potholes in the Grand Detour Portage area. On May 31, several nests with eggs were found on wood debris lying on rocks in the Slave River rapids near Fort Smith. Another nest with eggs, found at Tsu Lake on June 2, is probably near the northeastern margin of the breeding range.

BONAPARTE'S GULL *Larus philadelphia.* Several were recorded at the mouth of the Little Buffalo River during the period, May 28-30.

ARCTIC TERN *Sterna paradisaea.* Several observed in the mouth of the Little Buffalo River and in adjacent portions of Great Slave Lake during the period, May 28-30.

GREAT HORNED OWL *Bubo virginianus.* Heard calling at Salt River, north of Fort Smith, on June 1.

GREAT GRAY OWL *Strix nebulosa.* Four, including one pair and two singles, were observed along an 80-mile stretch of the Little Buffalo River, from the mouth of Sass River to Great Slave Lake, on May 27. A series of soft "who's" heard along the Sass River during the period, June 5 - 16, probably also were of this species.

SHORT-EARED OWL *Asio flammeus.* At least one was observed repeatedly, near the mouth of the Little Buffalo River during the period, May 28-30.

COMMON NIGHTHAWK *Chordeiles minor.* Fairly common in all locations visited. First observed along shore of Great Slave Lake on May 28 (?arrival date).

BELTED KINGFISHER *Megaceryle alcyon.* A few scattered pairs were recorded along the Sass and Little Buffalo Rivers, and nesting tunnels were observed in both areas. On May 27, a total of 12 individuals was seen along an 80-mile stretch of the Little Buffalo River.

YELLOW-SHAFTED FLICKER *Colaptes auratus.* Fairly common throughout. Especially characteristic of brushy "brule" country and prairie edge situation. On May 26, a pair was observed working on a nest hole in a dead balsam poplar.

PILEATED WOODPECKER *Dryocopus pileatus.* Several were recorded in the heavily wooded alluvial bottomlands along the Little Buffalo and Sass Rivers, above the Grand Detour Portage. This area is probably near the extreme northern limit of the breeding range.

YELLOW-BELLIED SAPSUCKER *Sphyrapicus varius.* Common throughout. Especially characteristic of aspen stands.

HAIRY WOODPECKER *Dendrocopos villosus.* Fairly common in the more densely forested tracts throughout the Grand Detour Portage, Little Buffalo River, and Sass River areas. One observed entering nest hole five feet above the ground in a live quaking aspen on May 27.

DOWNY WOODPECKER *Dendrocopos pubescens.* Apparently uncommon or rare. One was observed near the mouth of the Sass River on June 18. This locality probably is near the northern limit of the breeding range.

BLACK-BACKED THREE-TOED WOODPECKER *Picoides arcticus.* Apparently uncommon or rare. One was observed in a dense white spruce tract along the Sass River on June 17.

NORTHERN THREE-TOED WOODPECKER *Picoides tridactylus.* Probably uncommon. A pair was observed in upland white spruce forest, about one mile from the Sass River on June 16, and a single was seen near the mouth of the Sass River on June 17.

EASTERN KINGBIRD *Tyrannus tyrannus.* Scattered pairs throughout the Grand Detour Portage, Little Buffalo River and Sass River areas. Especially characteristic of brushy "brule" habitat.

EASTERN PHOEBE *Sayornis phoebe.* Two or three pairs were noted along the Little Buffalo River. An occupied nest was seen in the entrance of an old Belted Kingfisher burrow on May 27.

YELLOW-BELLIED FLYCATCHER *Empidonax flaviventris.* Apparently uncommon or rare. One was observed in a dense tract of bottomland white spruce along the Sass River on June 13.

TRAILL'S FLYCATCHER *Empidonax traillii.* Fairy common in wet brushy tracts overgrown with willows and other shrubs, in the Grand Detour Portage, Little Buffalo River and Sass River areas. First noted on June 10 (? arrival date).

LEAST FLYCATCHER *Empidonax minimus.* Rather common throughout the Grand Detour Portage, Little Buffalo River and Sass River areas, usually occurring in stands of quaking aspen.

WESTERN WOOD PEWEE *Contopus sordidulus.* A total of three was recorded in quaking aspen stands near the Sass River, the first on June 13 (?arrival date).

OLIVE-SIDED FLYCATCHER *Nuttalornis borealis.* Fairly common throughout the Grand Detour Portage, Little Buffalo River and Sass River areas, particularly in "brule" habitats. First observed on May 27 (? arrival date).

HORNED LARK *Eremophila alpestris.* A pair was observed on a small prairie near the mouth of the Little Buffalo River on May 29. Large flocks of migrants were noted at Fort Smith during the period, May 20-23.

TREE SWALLOW *Iridoprocne bicolor.* Fairly common throughout the Grand Detour Portage, Little Buffalo River and Sass River areas. Characteristic of forest edge situations along ponds, sloughs, and streams.

GRAY JAY *Perisoreus canadensis.* Common in forested tracts throughout. This is probably the most conspicuous bird in the area. Many birds in juvenal plumage were seen, the first on May 30.

COMMON RAVEN *Corvus corax.* Occasional singles or pairs were noted in all areas visited.

COMMON CROW *Corvus brachyrhynchos.* Two singles and one pair were recorded along the Little Buffalo River. One was observed near the mouth of the river, chasing a Raven (? breeding territorial behaviour).

BLACK-CAPPED CHICKADEE *Parus atricapillus.* Recorded at three locations along the Little Buffalo River.

BOREAL CHICKADEE *Parus hudsonicus.* Fairly common in white spruce forests at Fort Smith and in the Grand Detour Portage, Little Buffalo River and Sass River areas.

RED-BREASTED NUTHATCH *Sitta canadensis.* At least one pair was observed on three occasions in a tract of white spruce along the Sass River, about two miles above its mouth, during June 5-16. This locality is probably near the northern limit of the breeding range.

ROBIN *Turdus migratorius.* Fairly common in edge habitats throughout. A nest with eggs (embryo about 1/3 developed) was situated about four feet above the ground in a willow on May 26. Young were flushed out of a nest on June 20.

HERMIT THRUSH *Hylocichla guttata.* Fairly common in quaking aspen stands and edge situations throughout the Grand Detour Portage, Little Buffalo River and Sass River areas.

SWAINSON'S THRUSH *Hylocichla ustulata.* Common in white spruce forests in all areas visited. Population studies along the Sass River during June 13-16, indicated the density of territorial males to be about 33 per 100 acres in bottomland spruce and about 13 per 100 acres in upland spruce.

MOUNTAIN BLUEBIRD *Sialia currucoides.* On June 18, Robert P. Allen closely observed a pair along the Little Buffalo River, near the mouth of the Sass River.

RUBY-CROWNED KINGLET *Regulus calendula.* Fairly common in white spruce forests in all areas visited. Population studies along the Sass River during June 13-16, indicated the density of territorial males to be about 10 per 100 acres in bottomland spruce and about 13 per 100 acres in upland spruce.

WATER PIPIT *Anthus spinoletta.* Several migrants were recorded in a large prairie along the Grand Detour Portage on May 23.

WAXWING *Bombycilla.* Distant small flocks were observed at two locations along the Little Buffalo River on June 18 and June 19.

STARLING *Sturnus vulgaris.* Several were observed in prairie edge situations along the Little Buffalo River.

SOLITARY VIREO *Vireo solitarius.* Fairly common in bottomland white spruce forests along the Little Buffalo and Sass Rivers. Population studies along the Sass River during June 13-14, indicated the density of territorial males to be about 13 per 100 acres. These localities are probably near the northern limit of the breeding range.

RED-EYED VIREO *Vireo olivaceus.* Fairly common in quaking aspen stands in the Grand Detour Portage, Little Buffalo River and Sass River areas.

WARBLING VIREO *Vireo gilvus.* Apparently rare. A singing male was observed in a quaking aspen stand along the Grand Detour Portage on June 20.

BLACK-AND-WHITE WARBLER *Mniotilta varia.* Fairly common in quaking aspen stands in the Grand Detour Portage, Little Buffalo River and Sass River areas.

TENNESSEE WARBLER *Vermivora peregrina.* Common and widely distributed throughout the Grand Detour Portage, Little Buffalo River and Sass River areas. Occurs in forest and forest edge situations, including both spruce and aspen types. Population studies in bottomland white spruce along the Sass River during June 13-14, indicated the density of territorial males to be about 33 per 100 acres.

ORANGE-CROWNED WARBLER *Vermivora celata.* A pair exhibiting breeding behaviour was seen in a brushy thicket along the mouth of the Little Buffalo River on May 28.

YELLOW WARBLER *Dendroica petechia.* Fairly common, locally, in the Grand Detour Portage, Little Buffalo River and Sass River areas. Occurs in wet brushy thickets.

MAGNOLIA WARBLER *Dendroica magnolia.* A few were recorded in dense stands of young (brush stage) white spruce near the Sass River. First observed on June 5 (? arrival date).

CAPE MAY WARBLER *Dendroica tigrina.* Uncommon. A few scattered territorial males were observed in dense bottomland white spruce forest along the Sass River. First noted on June 5 (? arrival date).

MYRTLE WARBLER *Dendroica coronata.* Common in white spruce forests in all areas visited. Population studies along the Sass River during June 13-16 indicated the density of territorial males to be about 40 per 100 acres in bottomland spruce, and about 33 per 100 acres in upland spruce.

BAY-BREASTED WARBLER *Dendroica castanea.* Uncommon or rare. Single singing males recorded at three locations in dense bottomland white spruce along the Sass River. First noted on June 6 (? arrival date).

BLACKPOLL WARBLER *Dendroica striata.* A few singing males (possibly late migrants) were observed in brushy forest-edge situations as late as June 18.

Photo by R. E. Stewart

Little Buffalo River near Grand Detour Portage, May 27, 1955

Palm Warbler *Dendroica palmarum.* Fairly common locally along the Little Buffalo and Sass Rivers, occurring in brushy bog situations. These localities are probably near the northern margin of the breeding range.

Northern Waterthrush *Seiurus noveboracensis.* Fairly common in wet forested or brushy tracts along the Grand Detour Portage, Little Buffalo River and Sass River.

Yellowthroat *Geothlypis trichas.* Uncommon and local. A few scattered singing males were recorded in wet, brushy habitats along the Grand Detour Portage, Little Buffalo River and Sass River. These localities are probably near the northern margin of the breeding range.

Wilson's Warbler *Wilsonia pusilla.* Uncommon. A few scattered singing males were recorded in moist brushy thickets along the Little Buffalo and Sass Rivers.

American Redstart *Setophaga ruticilla.* Uncommon and local. A few singing males were observed in willow and balsam poplar *(Populus balsamifera)* growth along the Little Buffalo River.

Red - winged Blackbird *Agelaius phoeniceus.* Fairly common in cattail sloughs along the Grand Detour Portage, and along the Little Buffalo and Sass Rivers.

Rusty Blackbird *Euphagus carolinus.* Uncommon and local. A few scattered pairs were recorded in wet brushy tracts along the Grand Detour Portage, and along the Little Buffalo and Sass Rivers.

Common Grackle *Quiscalus quiscula.* Uncommon. A few pairs were observed along the shore of the Little Buffalo River, from the mouth of the Sass River to Great Slave Lake. This locality is probably near the northern margin of the breeding range.

Brown-headed Cowbird *Molothrus ater.* One observed along Grand Detour Portage on May 25.

Western Tanager *Piranga ludoviciana.* Fairly common in white spruce forests along the Little Buffalo and Sass Rivers and near the Salt River.

First noted at Salt River on May 22 (? arrival date). Population studies along the Sass River during June 13-16 indicated the density of territorial males to be about 10 per 100 acres in both bottomland and upland spruce.

ROSE-BREASTED GROSBEAK *Pheucticus ludovicianus.* Several singing males were observed in wooded areas along the Little Buffalo River, chiefly along the stretch between the mouth of the Sass River and Grand Detour Portage. This locality probably represents the extreme northern limit of the breeding range.

PURPLE FINCH *Carpodacus purpureus.* Several were noted in spruce or mixed forest along the Little Buffalo River. This locality probably represents the extreme northern limit of the breeding range.

PINE SISKIN *Spinus pinus.* Uncommon. A few were recorded in white spruce forests along the Little Buffalo and Sass Rivers.

WHITE-WINGED CROSSBILL *Loxia leucoptera.* Uncommon. A flock containing about 20 individuals was observed on several occasions in dense white spruce forest along the Sass River (one bird collected).

SAVANNAH SPARROW *Passerculus sandwichensis.* Common in open prairies along the Grand Detour Portage and along the Little Buffalo River and Sass River.

LE CONTE'S SPARROW *Passerherbulus caudacutus.* Fairly common in wet prairies or sedge-meadows along the Grand Detour Portage and along the Little Buffalo River. These localities are probably near the extreme northern limit of the breeding range.

VESPER SPARROW *Pooecetes gramineus.* Fairly common in prairie-edge situations along the Grand Detour Portage. On June 18, a total of five territorial males or pairs were observed, during a six-mile walk along a large prairie in this area. This locality is probably near the northern margin of the breeding range.

SLATE-COLORED JUNCO *Junco hyemalis.* Common in forest and forest-edge habitats in all areas visited. A nest containing five nearly full-grown young was found on June 14 along the Sass River. Population studies along the Sass River during June 13-16, indicated the density of territorial males to be about 27 per 100 acres in bottomland white spruce forest, and about 13 per 100 acres in upland white spruce forest.

CHIPPING SPARROW *Spizella passerina.* Common in forest and forest-edge habitats in all areas visited. On June 12, a nest containing four eggs and situated in a shrub willow one foot above the ground was found along the Sass River. Population studies along the Sass River during June 13-16, indicated the density of territorial males to be about 27 per 100 acres in bottomland white spruce forest and about 30 per 100 acres in upland white spruce forest.

CLAY-COLORED SPARROW *Spizella pallida.* Fairly common locally in dry brushy habitats along the Salt River, Grand Detour Portage, Little Buffalo River and Sass River. These localities are probably near the northern margin of the breeding range.

WHITE-CROWNED SPARROW *Zonotrichia leucophrys.* Fairly common locally in all areas visited. Especially characteristic of upland well-drained areas with an open growth of scattered shrubs. Breeding pairs also were found to be fairly common within the town of Fort Smith.

WHITE-THROATED SPARROW *Zonotrichia albicollis.* Fairly common in forest-edge habitats in all areas visited.

LINCOLN'S SPARROW *Melospiza lincolnii.* Fairly common in lowland, partially-open, brushy habitats along the Grand Detour Portage, Little Buffalo River and Sass River.

SWAMP SPARROW *Melospiza georgiana.* Rather uncommon and local, occurring in wet, brushy habitats along the Grand Detour Portage, Little Buffalo River and Sass River.

SONG SPARROW *Melospiza melodia.* Several singing males were observed

Photo by R. E. Stewart

Herd of Bison at rest in large prairie near Little Buffalo River, June 18, 1955

in brushy habitats along the mouth of the Little Buffalo River and adjacent shore of Great Slave Lake during May 28-30. Not recorded elsewhere.

Lapland Longspur *Calcarius lapponicus.* Migrants were abundant in large flocks at Fort Smith during May 20-23.

Notes on Other Vertebrates

MAMMALS

Black Bear *Ursus americanus.* Common along the lower course of the Sass River. Also fairly common in areas adjoining the Little Buffalo River. Several bears were seen and bear sign was frequently observed throughout the area.

Gray Wolf *Canis lupus.* Plentiful in the prairie sections located between the Slave and Little Buffalo Rivers. Numerous tracks were observed and howling heard at night. Tracks also were fairly common along the Little Buffalo River.

Lynx *Lynx canadensis.* Tracks were noted along the Sass River.

Least Chipmunk *Eutamias minimus.* Apparently uncommon. Only two (one collected) were seen, both near the Sass River.

Red Squirrel *Tamiasciurus hudsonicus.* Common in spruce forests in all areas visited.

Beaver *Castor canadensis.* Fairly common to abundant along the Little Buffalo and Sass Rivers. Particularly numerous along the Little Buffalo River between the Sass and Nyarling Rivers.

Muskrat *Ondatra zibetheca.* Two were recorded on May 27 and one on May 28 along the Little Buffalo River.

Snowshoe Hare *Lepus americanus.* Apparently very scarce. None was seen although droppings were observed at one location along the Sass River.

Moose *Alces americana.* Moose sign was frequently observed along the Little Buffalo and Sass Rivers.

Barren Ground Caribou *Rangifer arcticus.* One was observed at Tsu Lake on June 2. Tracks were seen along the mouth of the Little Buffalo River.

Bison *Bison bison.* Common in the prairie sections between the Little Buffalo and Slave Rivers. Many small groups and scattered individuals were seen and one large herd numbering about 300 individuals was observed. Bison sign was also frequently noted along the lower course of the Sass River.

REPTILES

Red-sided Garter Snake *Thamnophis sirtalis parietalis.* One was collected along the Little Buffalo River, about one mile below the mouth of the Sass River on May 26 (specimen deposited in Canadian Wildlife Service collection at Fort Smith). Two others were seen on June 18 along a cattail slough near the Little Buffalo River, about four miles downstream from the mouth of the Sass River. These records may represent the northernmost of any reptile in North America.

AMPHIBIANS

Boreal Chorus Frog *Pseudacris triseriata maculata.* Choruses of this species were heard throughout the Grand Detour Portage area and along the Little Buffalo River during the period May 23-30.

Leopard Frog *Rana pipiens.* Robert P. Allen reported seeing Leopard Frogs near the mouth of the Sass River on May 26.

Wood Frog *Rana sylvatica.* Common in moist situations along the Little Buffalo and Sass Rivers. Freshly laid eggs were seen along the Great Slave Lake Shore (near mouth of Little Buffalo River) on May 29.

Notes on Butterflies

*Red-disked Alpine *Erebia discoidalis.* Fairly common in prairies and sedge meadows along the Sass River (about two miles above its mouth during period June 5-10).

*Freija Fritillary *Boloria freija.* Fairly common in prairies and sedge-meadows along the Sass River during period May 26 - June 10.

*Saga Fritillary *Boloria frigga.* Fairly common in prairies and sedge-meadows along the Sass River during period June 5-10.

Pearl Crescent *Phyciodes tharos.* One seen on prairie between Slave and Little Buffalo Rivers on June 18.

*Hoary Comma *Polygonia gracilis.* Common along Sass River during period June 5 - 17.

*Mourning Cloak *Nymphalis antiopa.* Fairly common along Little Buffalo and Sass Rivers during period May 27 - June 17.

Banded Purple *Limenitis arthemis.* One seen at Fort Smith on June 21.

*Silvery Blue *Glaucopsyche lygdamus.* Common along Sass River during period June 5 - 17.

*Spring Azure *Lycaenopsis argiolus.* Common along Little Buffalo and Sass Rivers during period May 26 - June 17.

*Tiger Swallowtail *Papilio glaucus.* Fairly common along the Sass River during period June 5 - 17.

*Ausonides *Euchloe ausonides.* One was collected on a small prairie on June 12.

*Mustard White *Pieris napi.* Common throughout the area from June 1 - 17.

*Dreamy Dusky Wing *Erynnis icelus.* Fairly common near the brushy margins of prairies and sedge-meadows, along the Sass River during the period June 5 - 17.

Note—A few butterflies of the genus *Colias* and one of the genus *Speyeria* were also observed, but not identified to species.

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* Specimen collected.

TWENTY-FOURTH ANNUAL SASKATCHEWAN CHRISTMAS BIRD COUNT, 1965

One could almost use last year's summary again this year, since the 1965 Christmas Bird Count almost duplicates that of 1964. A total of 28 localities reported, 26 from Saskatchewan and one from each of Alberta and the Northwest Territories. Extremely cold weather prevailed during most of the count period. Of the 26 Saskatchewan counts, 18 were taken in sub-zero weather and seven of those at –20° or lower. Bangor reported the lowest Saskatchewan temperature with –34°. This was exceeded only by Cambridge Bay, N.W.T., where Ramon Burron and Rowan

Raphael braved –40° (wind chill –70°) for 3½ hours to compile their count.

Fifty-one species were recorded on "count" days with five others seen during the count period. No new species were added to the all-time list, so the total remains at 111. There seemed to be little change in the number of locations in which any of the sighted species was found. Black-billed Magpie (25 of 26 Saskatchewan localities), House Sparrow (21/26), Black-capped Chickadee (20/26) and Snow Bunting (20/26) were the most frequently reported species. The Regina Natural History Society again reported the largest number of species with a total of 31 for the "count day" plus six additionals during "count period".

Manitoba counts contributed to the *Blue Jay* are forwarded to the *Newsletter* of the Manitoba Natural History Society for publication.

BANGOR, Sask. Jan. 2, 1966; 14 miles by car and around farm yard; temp. –34°; wind light. 8 species, 217 individuals. Sharp-tailed Grouse, 1; Gray Partridge, 7; Downy Woodpecker, 2; Black-billed Magpie, 2; Black-capped Chickadee, 5; House Sparrow, 25; Evening Grosbeak, 15; Snow Bunting, 150.—Mrs. A. Thompson.

BATTLEFORD, Sask. Dec. 31; 5 miles on foot in 3½ hours; temp. –12°; wind NW 5 mph; 12 inches of snow. 12 species, 420 individuals. Bald eagle, 1; Ruffed Grouse, 3; Sharp-tailed Grouse, 2; Rock Dove, 2; Great Horned Owl, 1; Black-billed Magpie, 2; Black-capped Chickadee, 1; Bohemian Waxwing, 163; House Sparrow, 8; Evening Grosbeak, 3; Pine Grosbeak, 34; Common Redpoll, 200. (Add: Golden Eagle, 1, Dec. 23; Hairy Woodpecker, 2, Dec. 24; Downy Woodpecker, 1, Dec. 24.)—Harold Fisher, Glen A. Fox, Spencer G. Sealy (compiler).

BLADWORTH, Sask. Dec. 25; 25 miles by car. 4 species, 1053 individuals. Sharp-tailed Grouse, 26; Gray Partridge, 7; Rock Dove, 20; Snow Bunting, 1000. (Add: Golden Eagle, 1, Dec. 21; Snowy Owl, 1, Dec. 21; Horned Lark, 2 on Dec. 21, 6 on Jan. 1; Black-billed Magpie, 15, Dec. 23; Common Redpoll, 70, Dec. 31.)—Mr. and Mrs. Lawrence Beckie, Theresa, Bill, Gary and Hugh Beckie.

CARON, Sask. Dec. 26; at feeding station and 7 miles by car; temp. –16°; wind NW 20 mph; 4 inches of snow. 10 species, 237 individuals. Sharp-tailed Grouse, 12; Ring-necked Pheasant, 6; Gray Partridge, 8; Great Horned Owl, 1; Snowy Owl, 1; Downy Woodpecker, 2; Black-billed Magpie, 18; Black-capped Chickadee, 6; House Sparrow, 8; Snow Bunting, 175.—W. W. Riome.

DESCHAMBAULT LAKE, Sask. Jan. 2, 1966; 3½ hours and 4 miles on foot about the settlement; temp. –20° to –11°; wind W at 9 mph; clear. 6 species, 103 individuals. Black-billed Magpie, 2; Common Raven, 2; Black-capped Chickadee, 1; Boreal Chickadee, 4; Common Redpoll, 90; White-winged Crossbill, 4.—Richard M. Sanderson.

DILKE, Sask. Jan. 1, 1966; 35 miles by car and 3½ miles on foot in 5 hours plus choring around farmyard; temp. –10° to –15°; wind NW 5 mph; 12 inches of snow. 8 species, 302 individuals. Gray Partridge, 32; Snowy Owl, 1; Horned Lark, 3; Black-billed Magpie, 15; House Sparrow, 40; Rusty Blackbird, 6; Common Redpoll, 18; Snow Bunting, 187. (Add: Sharp-tailed Grouse, Dec. 22 and 27; Rock Dove, Dec. 24.)—Boswell Belcher (compiler), Margaret Belcher, Mr. and Mrs. S. R. Belcher.

DUNDURN, Sask. Dec. 28; 1½ miles on foot in 1 hour in open country, bluffs and farmyards; temp. –10°; wind ENE at 5 mph; overcast and snowing; 6 inches of snow on ground. 3 species, 58 individuals. Black-billed Magpie,3; Black-capped Chickadee, 1; House Sparrow, 54. (Add: Gray Partridge, 1, Dec. 30; Downy Woodpecker, 1, Jan. 1; Snow Bunting, 50, Dec. 30.)—Harry Harder.

ERINFERRY, Sask. Jan. 2, 1966; temp. –20°; calm. 13 species, 70 individuals. Hairy Woodpecker, 2; Downy

Woodpecker, 2; Gray Jay, 2; Blue Jay, 8; Black-billed Magpie, 2; Common Raven, 4; Black-capped Chickadee, 8; Boreal Chickadee, 2; Evening Grosbeak, 6; Pine Grosbeak, 4; Common Redpoll, 12; Red Crossbill, 6; Snow Bunting, 12.—Mrs. E. A. Dodd.

ETHELTON, Sask. Jan. 2, 1966; 20 miles by car and around yard; temp. –20°; clear and calm. 9 species, 140 individuals. Snowy Owl, 1; Hairy Woodpecker, 1; Black-billed Magpie, 6; Common Raven, 2; Black-capped Chickadee, 3; House Sparrow, 37; Evening Grosbeak, 20; Common Redpoll, 5; Snow Bunting, 65. (Add: Gray Partridge, 12, Dec. 27; Saw-whet Owl, 1, Jan. 1.)—Genevieve Belliveau (compiler), Mr. C. S. Campbell, Mrs. G. Clarke.

FORT QU'APPELLE, Sask. Jan. 1, 1966; temp. –15°; about 12 inches of snow. 9 species, 49 individuals. Sharp-tailed Grouse, 2; Great Horned Owl, 1; Hairy Woodpecker, 1; Black-billed Magpie, 1; Black-capped Chickadee, 12; Robin, 1; Bohemian Waxwing, 15; House Sparrow, 3; Pine Grosbeak, 12; Harris' Sparrow, 1. (Add: Gray Partridge, 15, Dec. 25 and 6, Jan. 2; Rock Dove, 16, Dec. 26 and 29; Downy Woodpecker, 1, Dec. 26 and 30; Blue Jay, 2, Dec. 22 and 1, Dec. 31, and Jan. 2; Northern Shrike, 1, Dec. 28; Common Redpoll, 200, Dec. 24; Slate-colored Junco, 1, Dec. 23 and 1, Dec. 29; Snow Bunting, 15, Dec. 25.)—Dr. and Mrs. G. D. Barnett, E. Manley Callin (compiler), Richard Carter, Mr. and Mrs. Errol Cochrane, Mr. and Mrs. Wm. Gray, Richard Nevard, Horace Reed, Mr. and Mrs. Jos. Rumancik.

HAWARDEN, Sask. Dec. 29; 20 miles by car and around farm yard; 7½ hours; temp. –2°; 6 inches of snow. 4 species, 510 individuals. Gray Partridge, 8; Horned Lark, 300; Black-billed Magpie, 2; House Sparrow, 200. (Add: Snowy Owl, 1, Dec. 31; Bohemian Waxwing, 1, Jan. 1; Snow Bunting, 200, Dec. 31 and 1, Jan. 1.)—Harold Kvinge.

INDIAN HEAD, Sask. Dec. 23; 16 miles by car and 7 miles on foot; 7 hours; temp. 5°; no wind; clear, except for fog in low areas; 10 inches of snow, 9 species, 156 individuals. Sharp-tailed Grouse, 2; Gray Partridge, 7; Rock Dove, 8; Hairy Woodpecker, 3; Horned Lark, 2; Black-billed Magpie, 6; Black-capped Chickadee, 3; House Sparrow, 120; Common Redpoll, 5. (Add: Snowy Owl, 1, Jan. 2; Snow Bunting, 57, Jan. 2.)—Lorne Scott.

KELVINGTON, Sask. Jan. 1, 1966; 1 hour about the town; temp. –20°; clear. 5 species, 175 individuals. Black-billed Magpie, 10; Common Raven, 1; Black-capped Chickadee, 3; House Sparrow, 86; Evening Grosbeak, 75. (Add: Hairy Woodpecker, 1, Dec. 24.) —Steve, Verna and Brian Waycheshen.

KINISTINO, Sask. Dec. 30; 36 miles; 2 hours on foot and 3½ hours by car; temp. –15° to –10°; wind at 10 mph; snowing in afternoon,. 10 species, 582 individuals. Sharp-tailed Grouse, 7; Rock Dove, 7; Snowy Owl, 1; Boreal Owl, 1; Downy Woodpecker, 1; Black-billed Magpie, 7; Common Raven, 9; Black-capped Chickadee, 2; House Sparrow, 27; Snow Bunting, 520.—Peter Wojcichowsky.

McLEAN, Sask. Dec. 24; 5 species, 50 individuals. Hairy Woodpecker, 2; Downy Woodpecker, 2; Black-billed Magpie, 2; Black-capped Chickadee, 20; Pine Grosbeak, 24. (Add: Sharp-tailed Grouse, 6, Dec. 31; Gray Partridge, 6, Dec. 31).—Mrs. Harold Bray, Mrs. Hilda Newton.

MOOSE JAW, Sask. Dec. 27; 63 miles by car and 8 miles on foot; temp. –19° to –15°; calm; 4 inches of snow. 10 species, 415 individuals. Ring-necked Pheasant, 30; Gray Partridge, 19; Rock Dove, 117; Great Horned Owl, 1; Black-billed Magpie, 25; Black-capped Chickadee, 5; Bohemian Waxwing, 6; House Sparrow, 200; Pine Grosbeak, 8; Common Redpoll, 4. (Add: Downy Woodpecker, 2, Dec. 24; Starling, 2, Dec. 31; Slate-colored Junco, 6, Dec. 29.)—Mr. and Mrs. G. P. Brodie, John Ellis, Mrs. F. V. Humphreys, Miss Patricia Kern, Mr. and Mrs. Cy Knight, Michael Rhodes, Mrs. George Rhodes, Mrs. C. V.

Stokins, Mrs. F. B. Taylor (compiler), Mr. and Mrs. Clarence West (Moose Jaw Natural History Society).

NIPAWIN, Sask. Dec. 27; 6¼ hours; temp. –25°; windy. 20 species, 430 individuals. Ruffed Grouse, 1; Sharp-tailed Grouse, 5; Gray Partridge, 8; Pileated Woodpecker, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Gray Jay, 3; Blue Jay, 9; Black-billed Magpie, 8; Common Raven, 16; Black-capped Chickadee, 5; Boreal Chickadee, 2; Red-breasted Nuthatch, 1; Bohemian Waxwing, 34; Northern Shrike, 1; House Sparrow, 250; Evening Grosbeak, 19; Pine Grosbeak, 23; Common Redpoll, 12; Snow Bunting, 30. (Add: Goshawk, 1, Dec. 30; Mourning Dove, 1, Dec. 15.)—Maurice G. Street.

PIAPOT, Sask. Jan. 7, 1966; about farmyard and 16 miles by car. 22 species, 3744 individuals. Goshawk, 2; Rough-legged Hawk, 1; Golden Eagle, 3; Bald Eagle, 1; Prairie Falcon, 1; Sharp-tailed Grouse, 17; Ring-necked Pheasant, 2; Gray Partridge, 14; Great Horned Owl, 3; Hairy Woodpecker, 1; Downy Woodpecker, 2; Horned Lark, 70; Black-billed Magpie, 18; Black-capped Chickadee, 14; Robin, 1; Bohemian Waxwing, 27; Northern Shrike, 2; House Sparrow, 94; Rusty Blackbird, 1; Pine Grosbeak, 70; Common Redpoll, 400; Snow Bunting, 3000. —Steve A. Mann (compiler), Peter Swain.

REGINA, Sask. Dec. 27; 231 miles in 21 hours by car and 18½ party miles in 17 hours on foot; temp. –25° to –15°; wind W 8 mph to NE 3 mph; 6 inches of snow; clear except mist over Waterfowl Park. 31 species, 3538 individuals. Mute Swan, 4; Whistling Swan, 4; Canada Goose, 200; Mallard, 412; Lesser Scaup, 4; Common Goldeneye, 1; Sharp-tailed Grouse, 5; Ring-necked Pheasant, 1; Gray Partridge, 126; American Coot, 3; Rock Dove, 40; Great Horned Owl, 6; Snowy Owl, 5; Hairy Woodpecker, 1; Downy Woodpecker, 3; Black-billed Magpie, 41; Black-capped Chickadee, 17; Boreal Chickadee, 3; Brown Creeper, 1; Robin, 8; Bohemian Waxwing, 31; Cedar Waxwing, 1; Northern Shrike, 1; Starling, 25; House Sparrow, 1797; Rusty Blackbird, 1; Pine Grosbeak, 92; Common Redpoll, 285; Slate-colored Junco, 1; White-throated Sparrow, 1; Snow Bunting, 418. (Add: Canvasback, 1, Dec. 21; Ruddy Duck, 6, Dec. 21; Pigeon Hawk, 1, Dec. 31; Red-breasted Nuthatch, 2, Dec. 28; Evening Grosbeak, 1, Jan. 1; Purple Finch, 1, Dec. 28.)—Mr. and Mrs. George Allen, Mrs. J. B. Bailey, Margaret Belcher, D. G. Bobbitt, Frank Brazier, E. H. Cooke, Mrs. Elizabeth Cruickshank, Elmer Fox, Jean Freeman, Doug Gilroy, James Jowsey, Harriet Jowsey, Elizabeth Lane, Frances Lane, Mr. and Mrs. Frank Lane, Dr. and Mrs. George Ledingham, Helen Morrison, Sally Moss, Robert Nero, Maureen Rever, Richard Sanderson, Mr. and Mrs. Hugh Smith (compilers) (Regina Natural History Society).

SASKATOON, Sask. Dec. 27; 17 party miles on foot in 14½ hours and 214 by car in 26 hours; temp. –31° to –22°; wind SW 10 mph; clear; 3 inches of snow. 25 species, 4395 individuals. Mallard, 15; Pigeon Hawk, 1; Ruffed Grouse, 1; Sharp-tailed Grouse, 53; Ring-necked Pheasant, 5; Gray Partridge, 141; Rock Dove, 315; Great Horned Owl, 1; Hairy Woodpecker, 4; Downy Woodpecker, 2; Horned Lark, 3; Blue Jay, 6; Black-billed Magpie, 186; Black-capped Chickadee, 25; Red-breasted Nuthatch, 1; Bohemian Waxwing, 381; Cedar Waxwing, 6; Northern Shrike, 2; Starling, 60; House Sparrow, 1836; Evening Grosbeak, 11; Pine Grosbeak, 204; Hoary Redpoll, 35; Common Redpoll, 794; Snow Bunting, 307.—John Black, W. J. Brucks, John Crabb, Don Dabbs, Bob Folker, Jonathan Gerrard, Dr. and Mrs. J. B. Gollop, Colin Gregory, Mr. and Mrs. Vic Harper, Jim Hogg, Dr. and Mrs. Stuart Houston, Stan Houston, Dr. Toshio Ishikawa, Mr. and Mrs. Murray Martin, John and Stanley Shadick, Dale Shockey, Jim Slimmon, Al Smith, Jim Wedgwood (Saskatoon Natural History Society).

SHAUNAVON, Sask. Dec. 28; 85

miles by car in 5½ hours; temp. -15°; calm; overcast; 2 inches of snow. 13 species, 384 individuals. Rough-legged Hawk, 2; Golden Eagle, 2; Ring-necked Pheasant, 2; Gray Partridge, 13; Rock Dove, 1; Long-eared Owl, 1; Short-eared Owl, 1; Horned Lark, 277; Black-billed Magpie, 18; House Sparrow, 1; Rusty Blackbird, 11; Common Redpoll, 2; Snow Bunting, 53.—J. David Chandler.

SPIRIT LAKE, Sask. Dec. 21; 5 hours and 4 miles on foot, as well as farmyards and 2 feeding stations; temp. 30°; wind NW 15 mph; cloudy in a.m., clear in p.m.; 6 inches of snow in woods. 10 species, 182 individuals. Ruffed Grouse, 7; Hairy Woodpecker, 3; Downy Woodpecker, 5; Black-billed Magpie, 3; Black-capped Chickadee, 30; Bohemian Waxwing, 30; House Sparrow, 25; Evening Grosbeak, 12; Pine Grosbeak, 7; Snow Bunting, 60. (Add: Sharp-tailed Grouse, 4, Dec. 22; Rock Dove, 6, Dec. 24; Common Redpoll, 5, Dec. 31.)—Wm. Anaka, Joyce Gunn.

WOLSELEY, Sask. Dec. 31; 20 miles on country roads; temp. 0°; 16 inches of snow. 7 species, 117 individuals. Gray Partridge, 9; Snowy Owl, 1; Black-billed Magpie, 3; Black-capped Chickadee, 1; Northern Shrike, 1; House Sparrow, 100; Pine Grosbeak, 2. (Add: Ruffed Grouse, 2, Dec. 23; Horned Lark, 2, Jan. 1; Snow Bunting, 1, Jan. 1).—Don Hayward.

WOODROW, Sask. Dec. 22; 41 miles by truck around the lake bottom on west side of the Wood River; temp. 30°; calm; 1 inch of snow. 12 species, 191 individuals. Rough-legged Hawk, 1; Golden Eagle, 1; Ring-necked Pheasant, 5; Gray Partridge, 21; Rock Dove, 6; Great Horned Owl, 1; Snowy Owl, 2; Short-eared Owl, 1; Horned Lark, 30; Black-billed Magpie, 3; House Sparrow, 40; Snow Bunting, 80. —C. H. Shulver.

YELLOW CREEK, Sask. Dec. 31; 4 miles on foot in 3 hours; temp. -8°; cloudy; 24 inches of snow. 4 species, 41 individuals. Ruffed Grouse, 3; Downy Woodpecker, 1; Bohemian Waxwing, 35; Common Redpoll, 2. (Add: Evening Grosbeak, 10, Jan. 1; Pine Grosbeak, 15, Jan. 1.)—Derwent Mazur.

YELLOW CREEK, Sask. Jan. 2, 1966; 4½ miles on foot in 3 hours through farmyards, fields and light brush; temp. -10° to -5°; wind light, becoming gusty; overcast with light snow; 13 inches of snow. 6 species, 203 individuals. Hairy Woodpecker, 2; Downy Woodpecker, 1; Black-capped Chickadee, 3; House Sparrow, 68; Pine Grosbeak, 36; Snow Bunting, 93. (Add: Great Horned Owl, 1, Dec. 21 and 23; Black-billed Magpie, 1, Dec. 31; Northern Shrike, 1, Jan. 1; Common Redpoll, 50, Dec. 31.)—Bohdan Pylypec.

WETASKIWIN, Alta. Dec. 25; 14 miles by car; temp. -15°; wind NW 20 mph; clear with drifting snow; 6 inches of snow. 4 species, 152 individuals. Black-billed Magpie, 1; Black-capped Chickadee, 6; House Sparrow, 20; Snow Bunting, 125. (Add: Rough-legged Hawk, 1, Dec. 21; Great Horned Owl, 1, Jan. 2; Hairy Woodpecker, 1, Dec. 21; Downy Woodpecker, 1, Dec. 26; Blue Jay, 1, Dec. 26; Northern Shrike, 1, Dec. 30; Pine Grosbeak, 1, Dec. 26.)—Fred H. Pegg.

CAMBRIDGE BAY, N.W.T. Dec. 25; 14 miles in 1 hour by car and 4 miles in 3½ hours on foot; temp. -40° to -36°; wind WNW 16 mph; no sun; 6 inches of snow. 1 species, 5 individuals. Willow Ptarmigan, 5. — Ramon C. Burron (compiler), Rowan Raphael.

COOPERATIVE SPRING MIGRATION STUDY

Records are again requested for the continent-wide survey being made under the auspices of the U.S. Fish and Wildlife Service. As soon as it is available, we shall have a list of species for which reports are wanted; please write for the list and then submit your records by June 15, 1966, to

Mrs. MARY HOUSTON
863 University Drive,
Saskatoon, Sask.

NOTES ON THE CARNIVOROUS TENDENCIES OF SOME SCIURIDS

by **Spencer G. Sealy,** Battleford

The animals known as rodents are the most successful of modern mammals next to man. They have exploited ecological niches on land, under the ground, in trees, and some in water. They are mostly herbivorous with structural adaptations to meet this end; however, carnivorous propensities occasionally show up among them. This note presents observations on the meat-eating tendencies of the rodent family Sciuridae, the squirrels.

The meat-eating tendencies of the Ground Squirrel *(Citellus lyratus)* have been documented by Geist (1933) and Cade (1951) on St. Lawrence Island, Alaska. Both authors reported this species feeding on other ground squirrels as well as other animals. Hanson, *et. al.* (1956) observed the Parry's Ground Squirrel *(C. parryii)* feeding on a bird carcass near the Perry River, Northwest Territories, and on two occasions in July, 1965, I observed the same species eating other ground squirrels which had been shot near the Gavin River, a tributary of the Perry River. On August 4, 1965, J. P. Ryder *(pers. comm.)* observed it feeding on another Parry's Ground Squirrel on the bank of the Ekalukpik River, about 30 miles east of the Perry River. Wilber and Mussachia (1950) in discussing aspects of fat metabolism in the Arctic Ground Squirrel *(C. barrowensis)* in Alaska, pointed out that it "thrives in its northern habitat and hence it must have solved the problem of balancing the budget of heat loss versus heat production." According to Cade *(op. cit.)* "if more animal fats are eaten by Arctic ground squirrels than is commonly supposed, this fact would seem to be equally important in explaining the relatively high level of production and storage in Arctic ground squirrels as an adaptive physiological mechanism for the more efficient synthesis of fats."

During the winters of 1959-1960 and 1960-1961 while weasel trapping in the Battleford area, Saskatchewan, I successfully trapped the Red Squirrel *(Tamiasciurus hudsonicus)* by employing the method used for weasels; that was a "cubby" with portions of meat placed behind a trap or on its pan. It was thought that the squirrels were "curious" and investigated the cubby on that basis, accidentally becoming caught, but this was found not to be the case entirely, for seven out of nine stomachs examined from specimens collected in this manner contained quantities of meat (the squirrels being caught before having a chance to feed on the bait could account for the stomachs devoid of meat). The remaining stomachs contained vegetable matter and it is presumed that this would constitute the bulk of its winter diet as animal matter would seemingly be unavailable.

During the summer of 1963 in the Brooks area, Alberta, the Richardson's Ground Squirrel *(C. richardsonii)* was observed on numerous occasions feeding on road-killed "gophers" and, in one instance on a White-tailed Jackrabbit *(Lepus townsendii)*. As many as four were seen feeding on a victim at one time. This habit, practised by adults and young, increased their vulnerability, for they seemed to pay no attention to oncoming cars and three or four dead ones were often seen within a few inches of each other on the road, presumably killed while consuming a previously killed animal.

On June 8, 1964 at Gorge Creek, Alberta, a Columbian Ground Squirrel *(C. columbianus)* was observed for three minutes feeding on a carcass of one of its own species at the entrance to a burrow. I do not know the cause of death of the animal being eaten but it would seem unlikely that cannibalism occurred or occurs in any rodent species except perhaps under severe populational stress.

I have no observations indicating whether any of these species actually pursue other animals with the intent to kill for food. Sowls (1948) found the Franklin's Ground Squirrel *(C. franklinii)* to be a predator upon the eggs of many waterfowl species at Delta, Manitoba, and Soper (1964: 143) states that individuals of this species have been known to kill and eat small rodents, native birds and chickens. Johnson (1922) tells of an incident whereby a Franklin's Ground Squirrel struggled with, killed, and devoured a young rabbit in northern Minnesota. J. Wilson, Indian Head, Saskatchewan (in *Blue Jay*, 2(4):32, 1944) saw a Franklin's Ground Squirrel, "standing erect, hold a prairie chicken's egg against its body with its front legs, and bend forward until the pressure, thus exerted, cracked the egg." Emlen and Glading (1938) report a case where a California Ground Squirrel *(C. beecheyi)* robbed a nest of the Valley Quail *(Lophortyx californica vallicola)* on May 17, 1937. H. H. Pitman (in *Blue Jay*, 2(4):32, 1944) once saw a Thirteen-lined Ground Squirrel *(C. tridecemlineatus)* "turning over the eggs in a prairie chicken's nest and even rolling over on its back clasping one in a probable attempt to break the shell."

Photo by Robert R. Taylor

Richardson's Ground Squirrel

It would be interesting to compare fat production, metabolism and storage in the Arctic and temperate ground squirrels and to note differences, if any persist, regarding their periods of activity and hibernation in these diverse climatic pressures. It would also be interesting to examine *Citellus* of the sub-tropics where aestivation commonly occurs during the hottest period of the year to see if its bioenergetics differ appreciably from its northern counterparts.

LITERATURE CITED

Cade, T. 1951. Carnivorous ground squirrels on St. Lawrence Island, Alaska. Jour. Mamm., 32:358-360.

Emlen, J. T., and B. Glading. 1938. California ground squirrel robs nest of valley quail. Condor, 40:41-42.

Geist, O. W. 1933. Habits of the ground squirrel Citellus lyratus on St. Lawrence Island, Alaska. Jour. Mamm., 14:306-308.

Hanson, H. C., P. Queneau, and P. Scott. 1956. The geography, birds and mammals of the Perry River region. Arctic Inst. N. Am. Spec. Pub. No. 3.

Johnson, A. 1922. Notes on the carnivorous propensities of the gray gopher. Jour. Mamm., 3:187.

Soper, J. D. 1964. The mammals of Alberta. Hamley Press, Edmonton. 402 pp.

Sowls, L. K. 1948. The Franklin ground squirrel, Citellus franklinii (Sabine), and its relationship to nesting ducks. Jour. Mamm., 29:113-137.

Wilber, C. G., and X. J. Mussachia. 1950. Fat metabolism in the Arctic ground squirrel. Jour. Mamm., 31:304-309.

Photo by Kay Hodges

Columbian Ground Squirrels

RETURN OF BISON TO MANITOBA

Hon. Arthur Laing, Minister of Northern Affairs and National Resources and Hon. Sterling R. Lyon, Q.C., Minister of Mines and Natural Resources of Manitoba, in a joint release, said today that a herd of 20 plains buffalo from Elk Island National Park in Alberta will be settled in the new 500,000-acre Mawdesley Wildlife Management area east of The Pas. This is a pilot project being carried out jointly by the Manitoba Department of Mines and Natural Resources and the Canadian Wildlife Service to find out if buffalo can survive in the wild again in Manitoba.

The area chosen for the release of the bison lies between Moose Lake and Mawdesley Lake. It was selected after reconnaissance surveys of several possible sites by federal bison experts. It contains habitat similar to that which supports plains bison in the Alberta portion of Wood Buffalo National Park. While climate and vegetation appear to be suitable, only a prolonged and intensive biological study can determine with certainty if bison can thrive in the area. Rather than wait for such a study, Mr. Lyon said, it was decided to release a small experimental herd and observe how they adapt to their new surroundings.

If the first release is successful, a second and larger release will be made in future, the Ministers said.

There is evidence that bison did occasionally inhabit the area at one time. Buffalo bones have been found near where the release will be made and the native people can recall stories of buffalo hunts in the area told by their forefathers.

These buffalo are being selected from the anthrax-free Elk Island herd. The buffalo are being released in an isolated area where there is no chance of them coming in contact with domestic stock.

If successful this experiment will see the return to Manitoba of one of its largest and most exciting wildlife attractions, Mr. Lyon said. The original herds were shot out and their habitat destroyed during the early settlement of the Province. Mr. Lyon said the re-introduction of the buffalo will return it to its natural home. The first release of the animals is expected late next year.

A NEW SPECIES OF OXYTROPIS FOR ALBERTA

by **Keith Shaw,** Cardston, Alberta

On May 16, 1958 specimens of an unknown *Oxytropis* were collected from gravelly soil on a south slope near the town reservoir at Cardston in southwestern Alberta. Since species determination was impossible from manuals available at that time, duplicates were sent to graduate student (now Ph.D.) Stanley L. Welsh, who was working on the Leguminosae at Iowa State College. Mr. Welsh identified these specimens as *Oxytropis lagopus* Nutt. var. *conjugans* Barneby. Verification was made by Rupert C. Barneby, noted authority on *Oxytropis,* of The New York Botanical Garden.

There are two varieties of the species *O. lagopus* Nutt. The var. *atropurpurea* (Rydb.) Barneby, is known only from Wyoming, extreme southern Montana and the peaks of the Black Hills. The var. *conjugans* Barneby has previously been reported from western Montana only. (Barneby, R. C. 1963. Notes on Oxytropis. Leaflets of Western Botany, Vol. X, No. 2).

Description of *Oxytropis lagopus* Nutt. var. *conjugans* Barneby: The pods are erect or spreading; stipules adnate to the petioles; plants scapose or subscapose. Inflorescence is not glandular viscid. Leaves are strictly pinnate. Racemes are 6- to many-flowered, rarely elongating in fruit. Corolla is a deep purplish-blue with a yellowish-orange base. Pods are not inflated; 5 mm. wide or less, gradually narrowed to a beak in fruit. Calyx with spreading hairs; inflorescence subcapitate; pubescence of foliage composed entirely of basifixed hairs.

Duplicates (R. K. Shaw 35) of *Oxytropis lagopus* Nutt. var. *conjugans* Barneby are in the herbaria of Brigham Young University, Provo, Utah and Iowa State College, Ames, Iowa.

A MOST VERSATILE SHRUB

by **Gordon Smith,** Winnipeg

With approaching spring many *Blue Jay* readers will be considering ways of attracting birds about the premises. Those who are thinking of planting a few berry-producing shrubs might try the Red Osier Dogwood, not only for the abundant fruit produced, but also for the masses of flower clusters with their delicate perfume. In the autumn the multi-hued leaves make it one of the most colorful of prairie shrubs, and, when the leaves have fallen, the red-barked branches are most attractive amidst the winter snow. Unfortunately the berries do not remain throughout the winter, but you can't have everything.

The Red Osier Dogwood *(Cornus stolonifera)* is perhaps the most wide ranging of the family in Canada, if not North America, and is found in varied habitats ranging from wet swampy areas, prairie woodland and dry sand hills. As the fruiting period extends from early July to late September in the prairie region its importance to birds as a food source cannot be underestimated. Robins, especially, feed on dogwood berries extensively during the hot dry summer when earth-worms are unobtainable and many young appear to be fed nothing else by their parents.

Two dogwoods in my backyard are now probably at their maximum height (6-7 feet) and have produced steadily for about seven years. While they have no doubt received more attention than they would in the wild they really don't require any fuss if you just want a "bushy" area for shelter and food. For the best shrubs I recommend digging your own, preferably from loose soil for less root disturbance. When they are once established the birds will provide a steady supply of seedlings, via droppings.

Besides Robins, other birds which I have observed eating the dogwood fruit include the Yellow-shafted Flicker, Eastern Kingbird, Empidonax Flycatcher (believed Least), Red-eyed Vireo, Cedar Waxwing, Catbird, Brown Thrasher, Baltimore Oriole, Swainson's Thrush, White-throated and Harris' sparrows (readers can no doubt add others). All these species swallowed the berries whole excepting the finches; they discarded the pulp for the seeds inside the large stone.

OWL'S-CLOVER

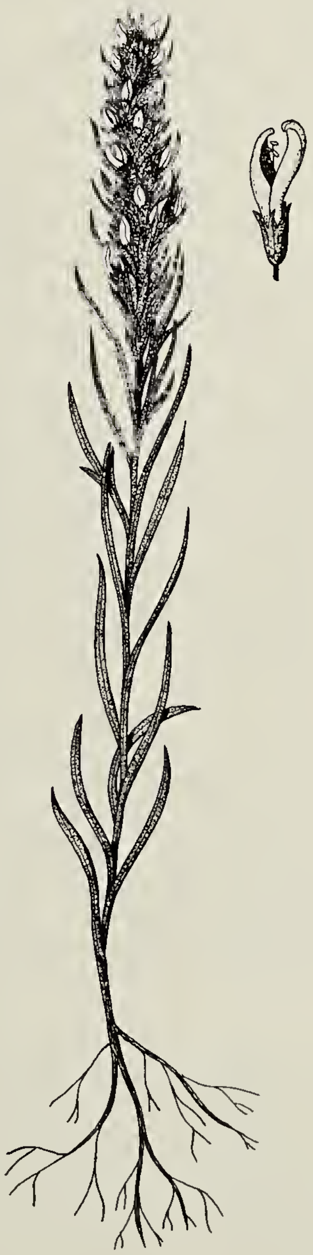
by **Keith F. Best**, Swift Current

Owl's-clover (*Orthocarpus luteus* Nutt.), sometimes called orthocarp, is a relatively small annual herb of the figwort family, ranging from British Columbia to Saskatchewan through Nebraska to New Mexico and California. It grows in a wide variety of soils, both dry and moist, from the sagebrush belt to the spruce-fir belt. Although probably most common on grasslands or in grass-weed types, it also occurs in bush and timbered areas. It grows more abundantly in meadows and parklands where the original vegetation has been reduced; consequently owl's-clover frequently is abundant on areas where the cover of more palatable plants has been somewhat depleted by overgrazing.

Owl's-clover derives its generic name *Orthocarpus* from the Greek words *orthos*, upright, and *karpos*, fruit, and it refers to the erect seed pods. The specific name *luteus*, is Latin for yellow and refers to the color of the flowers. This species is often called yellow owl's-clover or gold-tongue.

Blooming in late July and throughout August, owl's-clover is quite common on the dry, open prairie. Usually a single-stemmed erect annual, it is often found branched, a condition due to terminal bud damage by grazing. The leaves are one-half to one and one-half inches long, linear or narrowly lanceolate, lying relatively close to the stem and ascending. The yellow or gold flowers are borne in dense, leafy terminal spikes, interspersed with green bracts that are often tinged with red. The corolla of the flower is strongly two-lipped, the upper lip being erect or arched, while the lower one is more or less spreading and usually three-lobed. The stamens are arranged in two pairs, ascending under the upper lip.

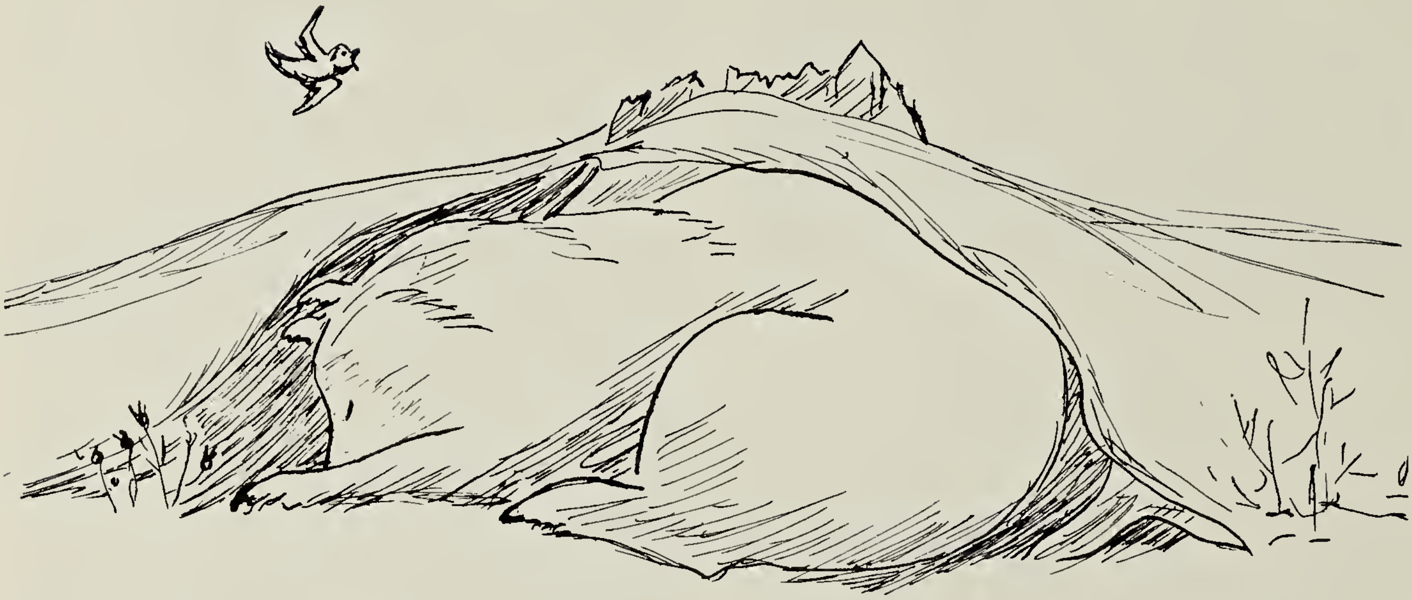
The species deserves notice because of its commonness and wide distribution, and because it is a representative member of a rather large genus of range species of somewhat unusual appearance. The plants are usually small, produce very little herbage, and are generally low in palatability. Accordingly, owl's-clover is of minor consequence as a forage species. It is practically worthless for cattle and only poor to fair sheep forage.



Drawing by K. F. Best

Owl's-clover *Orthocarpus luteus*

Junior Naturalists



RED FOX OBSERVATIONS

by **Derwent Mazur,** age 14, Yellow Creek

During the last summer I had quite a few opportunities for seeing a male Red Fox and his mate. While dad and I were picking stones we saw one of the pair. This one wasn't scared of us and we watched it for quite a while as it was catching mice. Incidentally, these two foxes had a den somewhere nearby which I could not locate. Another time while I was working summerfallow the female came out of the brush and was walking 20 feet in front of the tractor. I could tell it was the female for I could see her ribs and her fur was ruffled indicating that she had young. Later that day the male fox came out of the bush and crossed in front of the tractor and went about his own business. These two weren't scared at all.

After this I saw one of them at a distance and noticed it was carrying a crow. Even now I get a chance to see them almost every week.

AT THE MARSH ON BOXING DAY

by **Elizabeth Lane,** Regina

I was standing on the ice beside the open water at Regina marsh. The atmosphere was placid, but cold. A thick vapour was rising from the water and it took a while before my eyes became accustomed to it. Suddenly, I made out three long, slender, white necks. They were swaying back and forth as though a snake charmer was casting his spell over them. Graceful swans — I felt jubilant!

A splashing broke the peace and I turned my head quickly to see ducks a few feet away. I must have startled them for they rose from the stream forming a pattern in the sky. Their bodies were a rich, shining green mingled with blue, white and black—beautiful. They circled, then descended a little further on.

I will cherish the memory of this bird-watching experience for many Christmas Bird Counts to come.

DUCK BEHAVIOR

by **Harry Harder,** age 15, Dundurn

I read with interest Brian Irving's letter in the September 1965 issue of the *Blue Jay* concerning the peculiar behaviour of a pair of Shoveller drakes and it at once reminded me of our own flock of 25 giant white Peking ducks we raised last year. Brian noted that the ducks he sighted swam about pumping their heads up and down. Often one or two of our ducks would walk around the yard bobbing their heads up and down and making funny croaking noises. The reason for this I never found out but I believe it was probably just for amusement since they often behaved this way.

We made our ducks a small pond last year and at times a few would get into the water, start ducking under it and slapping it with their wings and in general making a big commotion. However, I never did see them trying to do each other harm or make any body contact at times like these as Brian noted in his observations.

From my observations the bobbing heads of our tame ducks was not part of a mating ceremony as Brian suggested was the case in his observations of wild ducks.

OBSERVATIONS TO MAKE IN MARCH

Brian Irving's sketch of a Sparrow Hawk is a reminder that it is one of the first birds to arrive back in the spring. Another colorful early spring arrival is the Mountain Bluebird so if you are planning to put out nest boxes for bluebirds you had better do so now. Other early arrivals include the crow, Marsh Hawk, Mallard and Pintail. Now is also the time to dust off your bird book and check up on your bird identifications for soon there will be so many birds using the flyways that it will be difficult to keep track of them all.

March is a good time to see how many trees you can identify by observing buds and bark. Soon you will be able to check your identification by studying the flowers and leaves. Flowers come out on wind pollinated trees before the leaves do. In poplar trees these flowers are known as catkins and appear late in March. See if you can tell the male poplars from the female poplars. Their catkins are different and by the time the seeds are produced you will know them apart for it is the female tree which produces the "cottony fluff" which contains tiny seeds.

by Brian Irving, Kelvington

Sparrow Hawk

In wooded areas the first green leaves of wild strawberries appear beneath the melting snows, while on the south facing slopes of open hillsides you can find the first grey-green leaves of sage, the dark green spikes of wild onion and the prickly leaves of the moss phlox. Yes, if we look hard we can see signs of spring even in March, a pleasant thought indeed on a bitterly cold January night.

CONTRIBUTIONS

Send contributions for the Junior Naturalist to **Mrs. Joyce Deutscher,** 7200 6th Ave., Regina, to arrive not later than April 15 to be included in the next *Blue Jay.*

FREE CONSERVATION AID

A 78-page critical index of films and filmstrips in conservation is available free of charge from the Audio-Visual Center of the Conservation Foundation, 30 East 40th St., New York 10016.

The Blue Jay Bookshelf

HOST RELATIONS OF THE PARASITIC COWBIRDS. By Herbert Friedmann. 1963. United States National Museum Bulletin 233. Washington, D.C. 276 p. $1.25.

Herbert Friedmann, now Director of the Los Angeles County Museum, has made a life-long study of the cowbirds. His first book on the subject — *The Cowbirds* — was published in 1929; the present volume brings up to date our knowledge of host relationships, incorporating thousands of additional instances of cowbird parasitism, gleaned from a careful check of almost all available publications. Since 1929, the Brown-headed Cowbird has extended its range considerably, allowing it to parasitize new species. Friedmann lists 206 species of birds in whose nests eggs of the Brown-headed Cowbird have been laid and 101 species known to have reared cowbird young successfully. The provinces and states for which such observations are available are listed for each species.

In addition to the Yellow Warbler, 28 other species have been known on occasion to build new nest linings over the cowbird eggs (including the Eastern Phoebe and Yellowthroat, contradicting his previous paragraph on page 36). Only eight species are known to evict cowbird eggs.

Shrikes have never been known to be victimized. Friedmann quotes the experiment of the late Laurence B. Potter of Eastend, Saskatchewan, who found that a partly incubated cowbird egg introduced into a Loggerhead Shrike nest was hatched and the young cowbird fed, while the shrikes stopped incubating their own eggs! This suggests that the shrikes are not victimized only because they drive away every cowbird that approaches.

Saskatchewan records for five species are not specifically mentioned by Friedmann: Least Flycatcher, Western Wood Pewee, Catbird, Hermit Thrush, and Swainson's Thrush. With these, a total of 46 Saskatchewan species have been recorded as parasitized by the Brown-headed Cowbird. Maurice Street has contributed records for 29 of these species from Nipawin alone.

As a stimulus to Saskatchewan bird-watchers to "fill in the gaps", it may be useful to give the list of Saskatchewan species known to be parasitized by the Brown-headed Cowbird to date:

Eastern Kingbird; Eastern Phoebe; Traill's Flycatcher (Street seldom finds an unparasitized nest); Least Flycatcher; Western Wood Pewee; Horned Lark (the only record for *E. a. enthymia*, by S. J. Darcus); Red-breasted Nuthatch (the only record for the continent, by Street); Catbird; Brown Thrasher; Hermit Thrush; Swainson's Thrush; Veery; Sprague's Pipit (the only record for the continent—by Albert C. Lloyd at Last Mountain Lake, May 29, 1932); Red-eyed Vireo; Tennessee Warbler; Yellow Warbler; Magnolia Warbler; Myrtle Warbler; Chestnut-sided Warbler; Ovenbird; Yellowthroat; Yellow-breasted Chat; Canada Warbler (the only western record; American Redstart; Western Meadowlark; Red-winged Blackbird; Baltimore Oriole; Brewer's Blackbird; Rose-breasted Grosbeak; Purple Finch; American Goldfinch; Rufous-sided Towhee; Savannah Sparrow; Baird's Sparrow; LeConte's Sparrow; Vesper Sparrow; Slate-colored Junco; Chipping Sparrow; Clay-colored Sparrow; White-throated Sparrow; Fox Sparrow; Lincoln's Sparrow; Swamp Sparrow; Song Sparrow; McCown's Longspur; Chestnut-collared Longspur.—*C. Stuart Houston*, Saskatoon.

Notes from Letters

TAKE A CANOE TRIP THIS SUMMER

Every move and pronouncement toward the setting aside of wilderness areas is met with feelings of real appreciation by many nature lovers. I, for one, have seen enough of our so-called "multi-purpose" parks. I have sought the beauty and solitude of a park and have been endlessly annoyed by the sound of oil wells pumping and oil trucks howling by. My heart does not exactly "leap up" when I behold in the midst of this "natural environment" some farmer's cows grazing in the park. Nor am I thrilled by the racket of a tractor and mower coming into the park to cut hay. And yet I wonder whether, through the years, people will slowly and unconsciously come to accept this state of affairs as part of our natural surroundings. Or can more of our younger generation of nature-minded people be led to leave the well-marked nature trails for an adventure into our wilderness? I believe they can and will, and that the canoe camping trip will some day be a significant holiday for those looking for more than the usual "two or three weeks at the cottage."

In September, 1965 I took a trip by canoe to hunt moose and ducks along part of the historic route from York Factory on Hudson Bay to the site where Winnipeg now stands. We travelled north and east from Norway House as far as Robinson Portage, a distance of 85 or 90 miles. The trip was unspectacular in many ways and broke no records for length or for feats of daring and skill, but I shall always remember it with the utmost satisfaction.

We left Norway House on a windy Monday afternoon laden down with enough supplies to last a week. Our canoe was a 17-foot canvas-covered one pushed sleekly through the water by a 10-horsepower motor. Being a novice at canoe travel I was glad to get off the rough waters of Little Playgreen Lake and into the quieter waters of the Nelson River, but my good-natured Indian friend, who has spent all his life travelling by canoe, just laughed at my uneasiness.

Eighteen miles "down north" of Norway House the first portage is made at Sea Falls, an operation that simply involves the hard work of carrying everything over the rise of rock to the place below the falls where it is again safe to enter the water. We paused a moment to watch the water roar over the falls and to wonder again at the steel pegs and rings in the rock in the middle of the river by which the York boats of early days were hauled up the falls. Later in the day, after our evening meal of beans and bannock, we came to the stretch of the river the Indians call "Mistii Miscowen", which means "the place where it is hard paddling", and the canoe traveller must be cautious in the swift current and small rapids. I was thankful that I had an experienced guide, and noted that even he was happy to put the fast water behind us!

We pitched our tent at night on an island in the middle of the river. There is something about the thrill of camping by a fast-flowing river in the wilderness which is hard to put into words. A person in this setting sees more clearly his true relation to the rest of nature.

The next day, after we had each completed our tasks in breaking camp, we moved on north through majestic high rocks and more swift water. At the place where the little Echimamish River flows into the Nelson we turned into the slower river running lazily between banks covered with high alders and willows. This led us after several dozen turns into Hairy Lake, which, as its name suggests, is a lake full of tall grasses and reeds. It is well known locally for the large numbers of waterfowl, but as we moved from opening to opening in the reeds and made our way across the lake we were disappointed to see so few ducks and geese. However, we continued to be moved by the beauty of the scenes around us, and I was particularly interested in this little lake where I could see, perched on an island and cosy in its surroundings of evergreens, the trapping cabin of an old friend of mine who visits me often and extolls the charms of the area. The black mark on the lake and along much of the river was the blackened trees and debris left by a forest fire which had come all the way from a woman's trash pile at Norway House to the south end of this little lake and beyond.

The trip up the Echimamish river is worth any amount of time and effort. The wildness and quiet beauty of this country would be therapeutic treatment for anyone. My guide and friend knew that I was interested in the history of this route and took time to point out places and to pass on stories about them which had come down through the years. At an old dam, for example, he explained how men had dammed up the river in several places to make the water deep enough for the York boats, and he showed me Pork Rock, a traditional stopping place for the York boat crews where they ate their ration of pork. From travelling these wild places I now have the utmost respect for those courageous settlers and their brave wives who came all that way to this frightening land.

Hector also kept me posted on whose trap line we were passing through. It was interesting to note how one trapping area would have lots of muskrats swimming along beside us, and a beaver house every few miles, while another would have very few of either. Hector answered my questions by pointing out that this was simply the difference between a good trapper and a poor one, showing so clearly how one man could have such an effect on his environment.

One of the most interesting places along the Echimamish is the spot which gives it its name, meaning "flowing both ways." Here the water in a large shallow marsh flows out both to the east and west. Boulders just under the surface of the water were numerous, and it required all Hector's skill to pilot us — this alone is reason enough to take a competent guide on a canoeing trip.

We made a second night's camp at Robinson Lake, where we hoped to find moose. We had in fact been further encouraged in our hopes by an encounter along the canoe route with friends returning from the lake with their canoes laden with moose meat! However, two days of trying to track moose brought no results, and we took our satisfaction instead in the other interesting sights around us. Leaving the lake by the Hayes River on our way to Robinson Portage, we were amazed to find large flocks of Buffleheads surprisingly tame. Robinson Portage itself is very interesting, with old strips of iron track lying in the bush where a railway with hand cars was once in use to transport goods along the mile stretch between Robinson Lake and Logan Lake.

One beautiful sight as we left on our return trip to Norway House was a pair of Bald Eagles which perched beside the river on tall spruce trees and watched us glide by. We arrived home tired and bearded, and without any moose, but I was deeply satisfied with my first long canoe trip. I think any readers of the *Blue Jay* who could start to make plans now for a canoe trip this summer would never regret it.

I would be pleased to supply anyone interested with information about the Norway House area, and there are many other sources of information about canoe trips that you can take. The Hudson's Bay Company, for example, advertises a "U - Paddle Canoe Rental Service." Anyone concerned about the initial expenditure of buying a canoe can take advantage of this latest service in wilderness outfitting. Aluminum canoes can be rented by experienced canoe-trip fans at various points throughout the north, including Yellowknife, Waterways, Ile-à-la-Crosse, La Ronge, Norway House, and may be picked up at one company post and turned in at another. Further advice can be obtained from the Northern Stores Department, Hudson's Bay Company, 79 Main Street, Winnipeg 1, Canada.

Take a canoe trip this summer, Canada's waterways are calling you. —*Rev. S. C. Fowke,* Norway House, Manitoba.

Editor's Note: Pamphlets on canoe routes in Saskatchewan are available from the Department of Natural Resources, Conservation Information Branch, Regina.

WINTERING ROBIN

On December 5, 1965 I was out bird watching with my friend Jack Luschyk, who is very interested in photography. At Bryant Park we sighted three White-winged Crossbills, a Blue Jay and five Pine Grosbeaks. In the Little Red River bridge area, about a mile and a half northeast of Prince Albert, we sighted 11 Pine Gosbeaks feeding on snowberries, 25 Bohemian Waxwings feeding on Saskatoon berries, and 17 Evening Grosbeaks busily cracking stones of dried chokecherries to get at the kernels. While I was looking elsewhere, Jack saw and photographed a Robin which he had found with the Evening Grosbeaks. Later there was a report in the P.A. Herald that a Robin had been seen in the west hill area at 251 19th St. West. Mrs. Spencer was home and told me that a Robin had been at their place since December 23, feeding on crabapples. On January 10 Mrs. Spencer phoned me saying that the Robin was back again, and eating crabapples. On that day it was 35° below zero; between January 1 and January 9 it had been as low as 44° below zero. Mr. A. O. Aschim, President of the Saskatchewan Natural History Society, told me he saw a Robin on November 28 at his home about four miles north of P.A. We talked over these records and decided that this may have been the same Robin.—*Auguste Viala,* Prince Albert.

Ed. Note: It is possible that P.A. had at least three wintering Robins; note that the Regina Christmas Bird Count recorded *eight* in the city on December 27.

SANDHILL CRANES FLYING WITH FEET DRAWN UP

In the September issue of the *Blue Jay* (p. 121) there was an article under the title above. My son Fred was reading this recently and remarked that last spring in the migration (May 12, 1965) 15 Sandhill Cranes stayed around a dugout that we have in the centre of cultivated land. Fred was seeding in the area and they were around for a week, and he saw some flying with their feet drawn up as reported by Mr. Bard. My diary for that date shows the weather to have been nice: temperature around freezing in the morning, and up to 50° or 60° in the afternoon. — *Mrs. Ken Skinner,* Indian Head.

PROTECT ROAD ALLOWANCE

My interests lie along ecological lines; during the past few years I have been doing considerable study of the organic foods and their possible benefit to mankind. Always the trail points to our errors in respect to the destruction of our many friends and benefactors from the lower forms of life. A Society such as ours should look with grave concern on the present practice of farmers annexing the Crown-owned road allowances for their own selfish gain of growing grain. I am a farmer, but recognize the rights of our flora and fauna to co-exist with us, invariably to our advantage. What better way could be found than by having the "powers that be" insist that the unused portion of the road allowances be declared out of bounds during the nesting season, and a program be instituted to develop as game and bird sanctuaries the countless number of acres that are today either lying idle, or being incorporated into the adjoining farms.—*C. P. Rycroft,* Kincaid.

BUILDING A POOL FOR BIRDS

During the months of July and August when the young nestlings of the year are trying out their wings and staying under cover, and the adults are passing through the moulting period, they usually stick to the heavy underbrush or the treetops. The hot days discourage us from expending too much effort in looking for them, so it is then a small bird pool in the garden pays dividends. Even though you may live near water (we are on the banks of the Seine River) birds seem to like the man-made pools. If you are fortunate enough to have trees in your yard, one end of the pool can be placed among them. It isn't a good plan to place a pool too close to evergreens as their low ground-level branches afford excellent cover for cats and a bird soaking wet isn't too agile.

It is no longer necessary to buy gravel and cement which makes a mess on the lawn, and ordering ready-mix in such small quantities is not economical. Instead there is a ready mixed dry cement called Redicrete on the market. It comes in fine, medium, and coarse, and all you need do is break the package and add water. It can be obtained in nearly all hardware stores and retails for around $1.20 a bag here in Winnipeg. A pool of this size takes about eight bags, depending on the thickness, five bags of coarse for the base, and three bags of fine for the finish coat. The actual mixing can be done on the sidewalk as it is easily washed off with the hose when finished. Your base coat should be mixed fairly stiff; it is easier to form the sides of the pool if this is done. Then, before the cement has set hard, the fine coat can be added and finished. Very little time is wasted in this way. There isn't any laid down plan as to shape. We built a pool of irregular shape five and one-half feet long, varying from two to three feet in width, and from two inches to four inches in depth. The important thing is DON'T make it too deep and DON'T make it too elaborate. Two to four inches is plenty deep enough and if you keep it saucer-shaped, the birds have no trouble getting in or out.

After you have chosen the area you intend to use be sure it is in such a place that you can sit and see the birds as they use it. Dig your excavation about four inches deeper than the finished pool depth. No special treatment need be given the hole. It doesn't need to be smooth, but shouldn't have any lumps of loose earth. If you wish, it can be tamped down; it makes it a little easier to work the cement. No reinforcement was used in ours and it has been in use now five years and shows no cracks. If you wish to use reinforcing wire by all means do so. When the hole is ready for the cement, mix the coarse mixture and dump it in your excavation. The cement, if fairly stiff, can be worked with a trowel to form the bottom and sides. It will set enough that the finer mix can be mixed and used almost at once. It is important not to let the coarse mix set too hard as you actually want a blending of the two for the finish. As to the edges, there are two ways of forming these. If you don't care whether they show, merely roll the cement out onto the ground with a trowel to form a rim. If you want to conceal the edge go an inch below the ground level and finish the cement with a small trough around the margin so that the grass will grow over it to the water's edge.

A pool of this type can be swept out with a broom in a few moments. We have transplanted lady's slippers around our pool and ground cedars cover most of the earth. Ours is placed partly in the sun and partly in the shade of some tall oak trees. We leave it full of water and let it freeze that way in the fall. An old piece of driftwood root placed in the deepest part, and anchored with a stone, makes an ideal landing perch. That's all there is. Good luck with your pool; it will draw many varieties of birds.—*Leroy Simmons*, Winnipeg.

WATER BEETLES IN THE WINTER

I was looking through some back issues of the *Blue Jay* and ran across a very interesting letter written by Joe Michel in the Junior Naturalists section (March, 1963, p. 36). He tells about finding water beetles swimming around in the water which was seeping through a crack in the ice over a spring. On December 5 we were out for a drive in the Brandon Hills, about eight miles south of town. We took a walk across a large frozen pond and found quite a number of spots in the ice that looked as though they had been open water a short while before, or maybe the day before. They were round holes, perhaps eight inches in diameter, with fresh black ice; frozen into the ice were dozens of water boatmen, some on the surface still alive. We drove on a couple of miles and examined the ice on Lake Clementi, also in the hills, and found the same occurrences. This was something I had never found before although we've often walked across frozen ponds in the winter. Another interesting note was a number of muskrat breathing-holes on both ponds. The holes were stuffed with some kind of under-water plant. —*Mrs. Barbara Robinson*, Brandon.

LATE DATE FOR BARN SWALLOWS

On October 2, 1965, late in the afternoon, I had taken out my binoculars to watch the great flocks of Canada Geese flying southward at Flaxcombe (west of Kindersley). Much to my surprise I saw three swallows circle overhead. When they came closer I discovered they were Barn Swallows. I was quite amazed because I had not expected to see any swallows so late in the fall. In my copy of *Life Histories of North American Flycatchers, Larks, Swallows, and their Allies* (By A. C. Bent), a record of fall migrating Barn Swallows at Eastend was September 22.—*Denny Kopan*, Calgary.

SOME INTERESTING NEST RECORDS

Of all the nests I observed during the summer of 1965 I thought the following were of particular interest. On June 24 I found a Catbird's nest attached to a thick stand of grass, even though there were chokecherry, willow, saskatoon and other bushes nearby. The nest was built with weeds and grass and was lined with fine grass. The parent was on the four eggs but left when I approached. This nest was near the Little Red River, two miles northeast of Prince Albert. Two miles south of Prince Albert on June 29 I found a Common Grackle nest on some flattened bulrushes in a one-acre slough. There was a small amount of mud used in the making of this nest. There were seven pairs of Red-winged Blackbirds nesting in the same place and some of their nests were only a few yards away from the Grackle nest. The Grackles seemed to be living in harmony with the Redwings. In the back yard of a cabin at Sunset Bay on Emma Lake, I found a Slate-colored Junco nest on July 14. The nest contained three Junco eggs and one Brown-headed Cowbird egg. Three weeks later when I returned to the nest, the Cowbird egg and one Junco egg had hatched. One Junco egg was missing, another was infertile. The young Cowbird was, of course, quite large compared to the young Junco. I watched the nest from a distance and noticed that the Cowbird got most of the feedings; however, the young Junco cuddled under the Cowbird's wing, so it got warmth in return for the Cowbird's board.—*Auguste Viala*, Prince Albert.

BLUE JAY SIGHTED

We have a Blue Jay here (letter December 6, 1965); this is the first one I have seen in the 25 years we have been living in this locality. This year we have also had flocks of redpolls; this is the first time we have seen them in such numbers at this time of the year.—*Mrs. Leo Ebell*, Amulet.

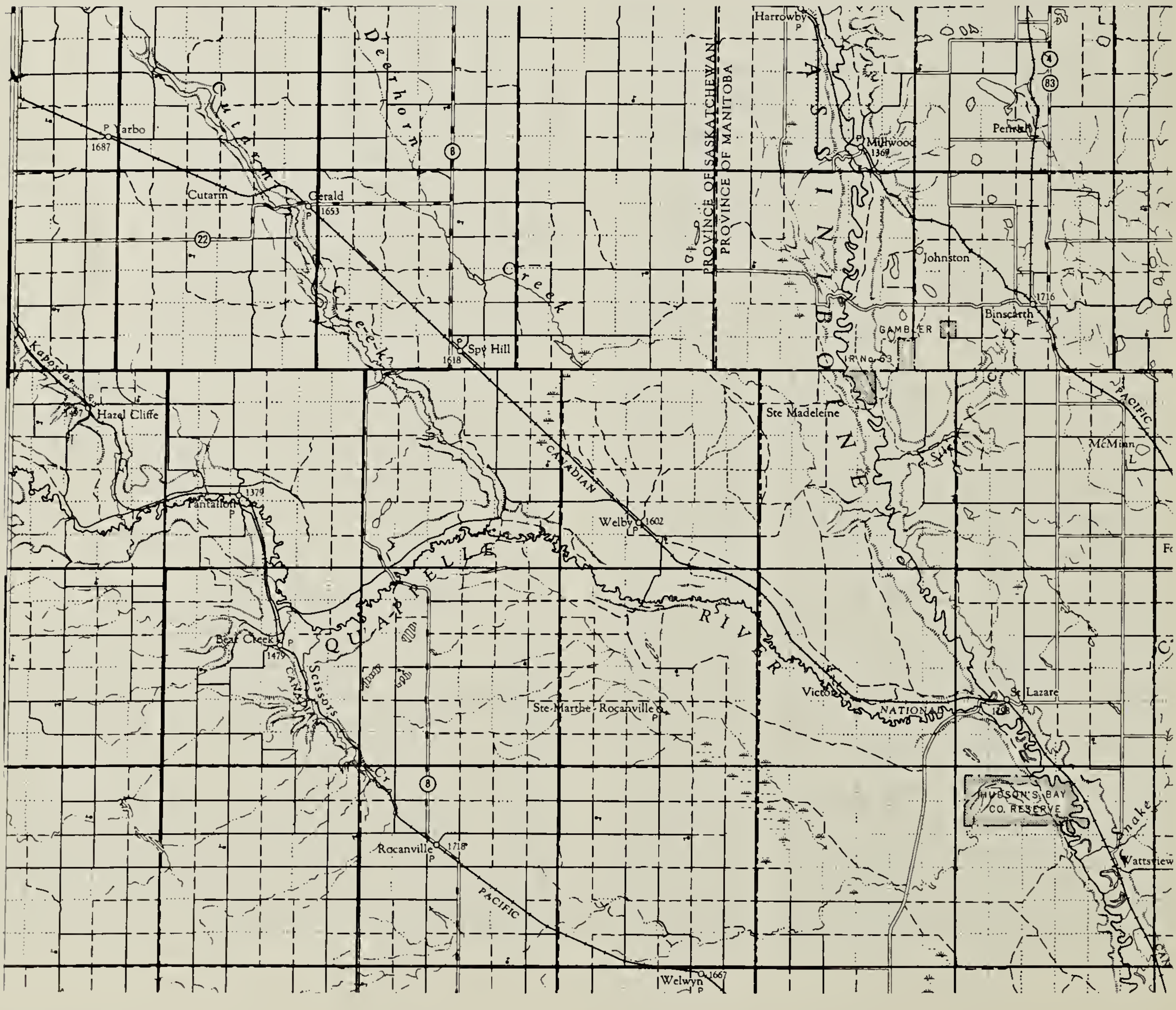
SNHS SUMMER MEETING ROCANVILLE, JUNE 10-12, 1966

The 1966 SNHS Summer Meeting will be held in eastern Saskatchewan with headquarters at Rocanville and field trips into the Qu'Appelle Valley. Members will register Friday evening, June 10, or Saturday, June 11 at the Rocanville Hall, and field trips will leave from the Hall on Saturday and again on Sunday morning. Special host for the event will be Ernie Symons of Rocanville, who has often extended an invitation to the Society to visit his part of the Valley. Areas of interest that will likely be studied on the field trips include Symons' "refuge" (a quarter section of virgin land 12 miles from Rocanville), the confluence of the Qu'Appelle and Assiniboine Rivers near St. Lazare and historic Fort Ellice, and the Valley north of Rocanville. Members who can stay longer than the two days devoted to the meet will want to explore the area further.

It will be seen from the map that the 1966 meet will allow excursions into Manitoba. Since the Society's activities have been faithfully supported by its Manitoba members, and since distances keep them from some of the summer meetings, we hope to see many of them this June.

Different vegetation zones have been represented in the locations chosen from year to year for the SNHS Summer Meet. This year, we shall be in the aspen parkland, with the influence of the eastern deciduous forest giving us an opportunity to see oak woods. The Yellow Lady's Slipper in Mr. Yanchinski's photograph is a typical flower of the moist woodlands of eastern Saskatchewan.

ACCOMMODATION: Particulars will appear in the next *Newsletter* re: camping sites (e.g. public campsites at Moosomin and Spy Hill), hotel accommodation in Moosomin and other neighboring towns, and billets (a limited number of billets can be arranged by writing to Ernie Symons). Make hotel reservations early.



Three Studies . . . by W. Yanchinski

Eastern
Phoebe

Yellow
Lady's
Slipper

Least
Chipmunk

"On the Trail"

Sketch by Robert D. Symons

DONATION TO THE SOCIETY

A most generous gift of $200.00 was made recently to the Saskatchewan Natural History Society by one of its active Alberta members, Charles H. Snell of Red Deer. With Mr. Snell's cheque came this explanation: "I note that your financial condition for next year may be short of a grant [the conservation grant from DNR which has now been discontinued] . . . so felt impelled to send you the enclosed to help close the gap, and prevent a possible dropping of some of your activities."

Mr. Snell has long been an active supporter of natural history and conservation activities. Born over 80 years ago in Torquay, Devonshire, he came to Canada in the early 1900's as a homesteader. After a brief period as a storekeeper, he became a surveyor and is widely known and respected for his work in this field. Always a naturalist, he became one of the leaders of the Alberta Natural History Society founded in 1904, serving with distinction as secretary, president, and executive member.

Ornithology became his life-long hobby and he has helped many young naturalists, as instructor and friend. On a survey trip to establish the 29th and 30th base lines west of Lake Athabasca in 1916, Mr. Snell saw one of his rarest birds. The cook of the party proudly announced he was serving the crew a wild white turkey he had shot. After the meal, Mr. Snell examined the discarded parts of the so-called turkey and sadly realized he had eaten a Whooping Crane! However, this same trip produced proof that bison were still living in the wild state west of the large lake, and as a result of the surveyors' recommendations, the Canadian government established the now famous Wood Buffalo Park. It was the second sanctuary Mr. Snell helped to establish; the first being the Gaetz Lake Sanctuary at Red Deer, 200 acres of a nature park still enjoyed by many district residents 30 years after Mr. Snell's work in setting up the wildlife refuge.

As a member of the Saskatchewan Natural History Society, Mr. Snell has for several years personally collected and submitted membership fees from all of the local members of Red Deer. The generous donation which is the latest expression of his interest in our Society deserves our heartfelt thanks.

THE SASKATCHEWAN NATURAL HISTORY SOCIETY

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THE BLUE JAY

Editor: Robert W. Nero; **Assistant Editor:** Margaret Belcher; **Junior Naturalists' Editor:** Mrs. Joyce Deutscher.

All articles and letters for publication should be submitted to Robert W. Nero, University of Saskatchewan, Regina Campus, Regina, Sask. **Material for the June, 1966 issue should be received by April 15, 1966.**

MEMBERSHIPS

The classes of memberships in the Saskatchewan Natural History Society are as follows: *Regular,* $2.00; *Supporting,* $3.00; *Sustaining,* $5.00; *Junior* (including schools), $1.00. The *Blue Jay* and *Newsletter* are sent without charge to all members not in arrears for dues.

Send all renewals and new memberships to Frank Brazier, Treasurer, SNHS, Box 1121, Regina, Sask.

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